

HOW TO SET UP FAMILY SHARING ON AN iPad, iPhone OR MAC



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FEBRUARY 2015
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GETTING READY
FOR THE
SCHOOL YEAR

The technology, apps and
accessories to get you ready
for the new study year.

THE PARANOID PERSON'S
GUIDE TO A COMPLETE
MAC BACKUP

GROUP TEST:
MUSIC ADAPTERS



REVIEWS | HELP GUIDES | APP REVIEWS | iSNAP

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GETTING READY FOR THE SCHOOL YEAR

An autumn glow is on the horizon as the new school year arrives. And with that, many parents are asking what technology is the must-have "must" which apps are they thinking of trying out this academic year? Do they have a new laptop or tablet? Offer parents a guide to the latest must-haves for the new school year.

NADINE CARRASQUA, senior editor

IT'S BACK TO THE CLASS What's the difference in bringing the school year back to school? It's the same, except that parents get to join in on the fun. Here are some ways to make sure the new school year is as much fun as the old one.

There's no doubt in my mind that the new school year is a great time to bring the family together. It's especially important if you have children in a different grade or have a different school year.

"What are we going to do with our time?" is a question that many parents ask. "What are we going to do with our time?" is a question that many parents ask. "What are we going to do with our time?" is a question that many parents ask.

It's time to start thinking about what you're going to do with your time.

One of the best ways to do this is to make a list of all the things you want to do. This can be anything from a walk in the park to a trip to the beach. It can also be something as simple as a walk in the park or a trip to the beach.

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GETTING READY FOR THE SCHOOL YEAR

As summer draws to a close, the new school year arrives. And with that, the questions arise: what technology do the students need? Which apps will help them stay on top of their workload? ANTHONY CARUANA takes a look.



103 PRODUCTS

GADGET GUIDE

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Music adapters

Unfortunately, not all speakers offer wireless connectivity. But you can change with the help of an adapter. Adam Turnley takes a look at four options.

Kaiser Bags SoundShirt
The SoundShirt is a speaker system in a jacket. It's designed to be worn around the neck, and it's a great way to listen to music on the go. It's a bit expensive, but it's a great way to listen to music on the go.

D-Link DCH-M225 WiFi audio extender
The D-Link DCH-M225 WiFi audio extender is a great way to extend your WiFi signal. It's a bit expensive, but it's a great way to extend your WiFi signal.

Netgear WN3000RP Dual Band WiFi Range Extender
The Netgear WN3000RP Dual Band WiFi Range Extender is a great way to extend your WiFi signal. It's a bit expensive, but it's a great way to extend your WiFi signal.

Belkin F7D7200 N600 WiFi Range Extender
The Belkin F7D7200 N600 WiFi Range Extender is a great way to extend your WiFi signal. It's a bit expensive, but it's a great way to extend your WiFi signal.

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How to pick the best photo editor for your life

By LEIGH SHARER

Browsing the App Store for photo editors can be a bit overwhelming. There are so many choices, and it's hard to know which one is right for you. Here are some tips to help you pick the best photo editor for your needs.

First, consider what you want to do with your photos. If you're just looking for a way to crop and resize images, then a basic photo editor like iPhoto or Photos will suffice. If you're looking for more advanced features, like filters and effects, then you'll need to look for a more powerful editor like Adobe Photoshop or Lightroom.

Next, consider your budget. If you're on a tight budget, then you might want to look for a free or low-cost option like GIMP or Pixlr. If you're willing to spend a bit more, then you might want to consider a paid option like Adobe Photoshop or Lightroom.

Finally, consider your needs. If you're a professional photographer, then you'll need a more powerful editor like Adobe Photoshop or Lightroom. If you're a casual user, then you might want to look for a more user-friendly editor like GIMP or Pixlr.

Overall, the best photo editor for you will depend on your specific needs and budget. By following these tips, you should be able to find the right photo editor for your life.

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Nikon D3300
Solid compact DSLR for beginner and pro alike

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Sony PlayStation Play
A compact media streamer that's perfect for playing games and watching movies.

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2015's second biggest product?

The Apple Watch will be the biggest product out of Cupertino in 2015. In true Apple style, the company waited to canvass the wearable market before showing off a product that combines fitness, design and connectivity in a variety of personal styles.

But until the wearable launches next month in the US, and hopefully Australia, and the media coverage leaves everything else on the backburner, the rumours surrounding a new Apple product have piqued my interest.

Many rumours remain just that, ideas, whether born from fact or hope-filled reporting, that do not realise into products. And a 12in MacBook Air sounds like another that could easily slip into that category, but I think it will come to pass.

Apple already sells 11in and 13in MacBook Air models and that makes it seem odd that the company would release a model straight down the middle, especially as the rumours claim Apple will do away with full-sized USB ports, MagSafe connectors and SD card slots in order to accommodate a thinner body.

Apple has made these dramatic jumps before. The iMac G3's launch in 1998 drew criticism for its lack of the, then standard, floppy drive.

But with the rise of cloud storage and Bluetooth accessories, the end of the USB is on its way. It won't be tomorrow, or even within a decade like the floppy drive, but technology moves forward and Apple has been willing to take the criticism in the past.

Apple has taken a lead with the removal of the optical drive from most of its lineup and the non-Retina MacBook Pro will likely disappear in the coming months without much public protest.

The Air is designed for the road, tucked up in bed or in a classroom, locations where USB keyboards and mice don't boost productivity.

Our iOS devices, besides the headphone port, only feature a Lightning connector and we don't have any issues transferring data to and from them. It is wireless and often hassle free.

A Thunderbolt port to connect to an external display, on the other hand, would have to feature.

If Apple does launch a redesigned MacBook Air aligned with the rumours, it will be a step forward for Apple and the second biggest launch of 2015.



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STAFF PICKS

Favourite product unveiled at CES 2015?



JONATHAN STEWART

WITRICITY

Simply plug a transmitter into a power plug and all of your nearby devices begin to charge wirelessly. No cables. How easy is that!



MADELEINE SWAIN

BMW DEMO

I'm hoping that the BMW demo of the self-parking, self-stopping car will be a thing around the time my children start driving lessons...



TYNAN McCARTHY

MERIDIAN MQA

High quality audio that's still compact enough to stream! What's not to love?



MONIQUE BLAIR

FUHU 65IN BIGTAB

By far, my favourite thing from CES is Fuhu's 65in BigTab, a 4K touchscreen tablet that's bigger than my TV!



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Future proof your facility with advanced 4K SD, HD and Ultra HD mini converters!

Blackmagic Design's new high performance mini converters switch instantly between all SD, HD and Ultra HD video formats so they're ready for Ultra HD when you are! Mini Converters are available in regular or heavy duty models that are machined from solid aluminum so they look beautiful and are super tough! Choose from models with 6G-SDI, HDMI, analog, optical fiber connections and more.



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6G-SDI Technology

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Mini Converter Analog to SDI	\$395
Mini Converter SDI to Audio 4K	\$395
Mini Converter Audio to SDI 4K	\$395
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Mini Converter SDI Distribution 4K	\$395
Mini Converter Sync Generator	\$395





HAVE YOUR SAY

LETTER OF THE MONTH



DEPENDS ON THE WATCH

If the rumours are true and Apple is looking into an iPhone mini, whether I'd buy a mini is heavily dependent upon how well the Apple Watch ends up complementing the iPhone. I mostly love my iPhone 6 and find it a better phone than my iPhone 4s, but the size is frustrating and awkward at times for me. There are moments I feel like I'm about to send the phone flying out of my hand when I try to do things one-handed. It doesn't feel right and it's frustrating.

A smaller phone would have to have all the features of the bigger phones, including the faster processors, NFC (near field communication), camera, etc... and the screen quality needs to be on a par with the bigger phones. One advantage of the iPhone 6 screen that has nothing to do with its size, is that its colour rendering and brightness range seem, to my eye, to be noticeably better than my child's iPhone 5s (and way better than my 4s). I would want that same image quality.

But again, it depends on how well the Apple Watch ends up complementing the iPhone.

Benjamin



APPLE'S DIRECTION

With regards to Marg B's letter, 'The Direction Apple Is Taking' (November 2014), I have to agree entirely. I, too, have expressed similar sentiments in previous letters. I also only use iCloud minimally for syncing Contacts, Mail, Calendar and Find my Phone/Mac. All my data is on my Macs and my local backups, including an off-site SuperDuper clone.

I have been a Mac user since 1998 and the current OS is the least Mac like yet, the last 'proper' Mac OS was Snow Leopard. I was most disappointed when Apple even dropped the word 'Mac' from OS X!

I also feel that the same thing could be said about most 'Mac' magazines. I think they should change their name to 'Appleworld', why not dump the name Mac altogether? I have been a reader and subscriber to *Macworld* for many years and find that for those of us without an avid interest in iDevices, iOS, apps and watches, it is becoming less and less attractive...

Ken

iTUNES FRUSTRATION

I'd like to join the crowd that is frustrated with the new iTunes 12.

Here's my simple test:

- import an audio file into iTunes, and
- sync it to your iPhone.

I've been an iTunes user for years and gave up. Why do they not first check to see if customers can do basic tasks before they release upgrades?

I always suggest to software makers that they sit behind users trying to carry out basic tasks, but with tape over their mouths and hands tied behind their backs so they cannot assist, to discover if their software changes are, in fact, user friendly.

Jamie H

THIN TECHNOLOGY

In regards to *Macworld Australia*'s online article, 'Why it's (finally) time to embrace thin client technology' (bit.ly/1FJICbm), I've lived through several thin client revolutions so I'm not holding my breath.

While much of the technology is in place, there is the perennial problem of inadequate bandwidth. My home is in Perth, Western Australia and, while some places have fast reliable service, most of the city doesn't. It is even worse in rural areas. Thin client systems can be implemented on a site-by-site basis, but that negates some of the advantages. I'll get excited when I can do real work over the public network but I don't think we're there yet.

Udi

WORD FOR iOS

I have tried the Microsoft Office apps for iOS on my iPad Air. They are highly-featured and enhance the iPad content creation experience. However my organisation (university) provides a site-licence for MS Office and my MacBook Pro computer, but not OneDrive or Office for iOS, thus any subscription that I pay for Office 365 is for software that is partly already provided. Microsoft needs to talk to site licence holders regarding a licence that enables staff to do their work on computer and iPad.

Robert

12IN MACBOOK AIR

In reference to the online piece 'Apple's next MacBook could be a 12in MacBook Air' (bit.ly/17yAREA), no MagSafe? No way.

If the new USB port can charge, how does one use other USB devices or charge an iPhone if the laptop is charging? Unless the charger doubles as a USB hub, but that seems like a lot of cabling all over the place.

I also can't see Apple selling an 11in, 12in and 13in Air plus a 13in and 15in Pro. Either the 11in or the 13in Air is going or both. However, I can see the Thunderbolt being only used on the high-end laptops like FireWire did previously. But if they ditch Thunderbolt there's going to be some annoyed people out there that just dropped a lot of money on Thunderbolt drives.

JB

- Letters should be emailed to editor@macworld.com.au with a subject header of 'Letter to the Editor' or by post to: Macworld Australia Mailbox, 142 Dorcas Street, South Melbourne, Victoria, 3205. Please include your full name and address, including state or territory.
- Comments on stories or Forum posts on www.macworld.com.au are also eligible for the prize.
- We reserve the right to edit letters and probably will.
- Letters of fewer than 200 words are given preference.



This month's prize to the *Macworld Australia* reader who has submitted what we think is the most interesting letter is an Apotop APT-DW21 Wi-Copy Wireless Smart Device, worth \$129, from Anyware.

The Apotop Wi-Copy allows users to wirelessly connect SD cards and USB flash drives with their smartphones and tablets, enabling them to transfer and store photos, music and documents without their laptop.

The Apotop, which sports a 14-hour battery life, can also convert an internet cable into a Wi-Fi hotspot, letting multiple devices connect to the web.

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TERMS AND CONDITIONS. Letter of the month 1. Instructions on how to enter form part of these conditions of entry. 2. To enter send tips or queries to editor@macworld.com.au with a subject header of "Letter to the Editor". Entries will be judged by the editorial staff of *Macworld Australia*. The judges' decision in relation to any aspect of the competition is final and binding on every person who enters. No correspondence will be entered into. Chance plays no part in determining the winner(s). Each entry will be individually judged based on its degree of interest. 4. Employees, their immediate families and agencies associated with this competition are not permitted to enter. 5. The Promoter accepts no responsibility for late or misdirected entries. 6. The best entry/entries as determined by the judges will win the prize(s). The Promoter is neither responsible nor liable for any change in the value of the prize occurring between the publication date and the date the prize(s) is claimed. 8. The prize(s) is not transferable and will not be exchanged for cash. 9. The winner(s) will be notified by email. 10. All entries become the property of the Promoter. 11. The collection, use and disclosure of personal information provided in connection with this competition is governed by the Privacy Notice. 12. The Promoter is Niche Media Pty Ltd of 142 Dorcas Street, South Melbourne, Victoria 3205 Ph 03 9948 4900, (ABN 13 064 613 529).

HOT STUFF

A selection of Apple, Mac and iOS news from Macworld.com.au



iOS 8 RUNNING ON 68 PERCENT OF iPHONES AND iPADS

Apple shared its latest data on iOS 8 adoption in January, showing that 68 percent of iPhones, iPads and iPod touches were running the latest version of Apple's mobile operating system. Apple tracks iOS adoption by looking at devices that access the App Store, and marking which version of iOS is running on each of those devices.

The latest App Store Distribution data was collected on 5 January. Besides iOS 8 data, it shows that 29 percent of devices are still running iOS 7 and four percent are still clutching on for dear life to iOS 6 or earlier.

Apple's last iOS adoption data was from November 2014, which showed 60 percent of devices had upgraded to iOS 8. An eight percent uptick in two months time is pretty slow, especially considering the sales boost that Apple must have seen during the holiday season.

We've noted before that iOS 8 has had a particularly rough time getting off the ground compared to older versions of iOS. iOS 8 saw sky-high installations when it first launched – it hit 46 percent of devices just six days after it launched back in September 2014 – but then downloads steadily tapered off. By comparison, iOS 7 hit 74 percent of devices just three months

after launch and it quickly became Apple's fastest growing mobile operating system. iOS 8 lost that race.

There are several theories on why iOS 8 installations are lagging. Bugs plagued early releases – remember when iOS 8.0.1 made some iPhone 6 and 6 Plus models basically unusable? – and it continues to have little problems here and there, which could contribute to users' hesitation. Many of the perks of iOS 8 can only be accessed on the iPhone 6 and 6 Plus, and some older devices may not be equipped to handle the update even if they are technically compatible. Or, it could be the size of the install itself.

IPHONE 6 SALES BOOST APPLE'S SMARTPHONE OS MARKET SHARE

The launch of the iPhone 6 helped Apple increase its share of the smartphone OS market in eight countries, according to a report from research firm Kantar Worldpanel ComTech.

For the three months ending in November 2014, iOS's market share grew in Australia, the US, Germany, the UK, China, France, Italy and Spain. Sales were weaker in only one of the surveyed countries, Japan, where Apple's share fell by 15.3 percentage points. The decrease wasn't due to a lack of interest in the

iPhone 6, which went on sale globally last September. Japanese carrier NTT DoCoMo began carrying the iPhone in 2013, a move that gave iPhone sales a special boost that year, Kantar says.

Android remained the dominant mobile OS globally, buoyed by the ecosystem's variety of devices and prices, but its market share decreased in the US and some European countries compared with the same period in 2013. Sales in the UK, France, Germany, Spain and Italy, Europe's five biggest economies, were collectively down by 3.2 percentage points. Even with this decline, Android was still the leading mobile OS in those five nations, holding a 69.9 percent market share.

APPLE BLOCKS TOOL THAT BRUTE-FORCES iCLOUD PASSWORDS

Apple has fixed an issue that could have allowed attackers to launch brute-force attacks against iCloud users in order to guess their passwords.

The problem came to light after a proof-of-concept attack tool called iDict was released on GitHub in early January.

Developed by a user who uses the online alias Pr0x13, the tool was described as "100% Working iCloud Apple ID Dictionary attack that bypasses Account Lockout restrictions and Secondary Authentication on any account".

It worked by trying out a large number of passwords for the targeted Apple IDs. By default the tool came with a file – also called a dictionary – containing 500 commonly used passwords, but the list could have easily been extended.

Online services like iCloud typically limit the number of failed log-in attempts per account in order to prevent brute-force attacks, but Pr0x13 allegedly found a way to bypass those protections.

Pr0x13 claims that he made iDict public in order to draw attention to the problem

and force Apple to fix it. "This bug is painfully obvious and was only a matter of time before it was privately used for malicious or nefarious activities," he said in the tool's description.

Apple was relatively quick to act and started enforcing rate limiting for log-in attempts done with iDict a day after the tool became available.

APPLE'S BEATS UNIT SUED BY MONSTER OVER HEADPHONE DEAL

Apple's Beats Electronics and its co-founders have been sued in a US court for allegedly easing out headphones developer Monster from a partnership ahead of the 2014 acquisition by the iPhone maker.

Describing a 2011 investment by HTC in Beats as a "sham transaction", Monster and its founder Noel Lee have alleged that the deal was used by Beats to invoke a clause in its contract with Monster to end the partnership while retaining all rights to the headphone technology.

HTC, which has also been named as a co-defendant in the complaint filed in the Superior Court of California, acquired a majority stake in Beats for about US\$300 million, with the plan to use the headphones technology with its mobile phones.

By July 2012, Beat's founders bought back half that equity from HTC, making the earlier ending of the partnership with Monster by invoking a change of control provision a "complete sham", according to the complaint, which cites as evidence a conversation in May last year between Monster executives and a board member of HTC. By September, 2013 Beats had bought back the remaining equity held by HTC.

Apple declined to comment on the suit. HTC could not be immediately reached for comment.



Beats' co-founders Jimmy Iovine and Andre Young, popularly known as Dr. Dre, entered into a partnership with Monster in January 2008 to develop and promote Monster's 'Beats By Dr. Dre' product line, a licensed marketing label for a line of Monster headphones, according to the complaint. Monster claims it handled all design, engineering, manufacturing, production, marketing and distribution of the headphones in return for a licence to the Beats brand and celebrity marketing by Iovine and Dre.

"Simply put, Monster did all the work, financed the entire effort, and paid Iovine and Dre a royalty for their marketing efforts," according to the complaint. By 2009, Beats Electronics had been added to the licence and promotion agreement as a party and Lee was offered a five percent stake in Beats' equity to cement ties between the two companies.

Citing the change of control provision in the agreement after the HTC investment,

Beats acquired Monster's 'Beats By Dr. Dre' product line, including all development, engineering, manufacturing, marketing, distributing and retail rights.

If the partnership had expired on its own terms some months later, this transfer would not have happened, according to the complaint, which holds that, as a result, Monster and Lee lost millions of dollars.

Lee had also sold most of his five percent stake in Beats in September 2012, after HTC sold back half its stake to Beats, as he "was concerned that he was being kept in the dark by Beats about material aspects of the business". He was later persuaded to offload the remaining 1.25 percent share to Beats, resulting in a total loss of over US\$100 million if he was still a five percent stakeholder after the Apple acquisition was announced, according to the complaint.

Monster has asked for damages including punitive damages, and a jury trial for all relevant issues. ↗

HOT STUFF

A selection of Apple, Mac and iOS news from Macworld.com.au



APP STORE BROKE ITS SALES RECORD ON NEW YEAR'S DAY

Apple has announced that 1 January 2015 was "the single biggest day ever in App Store sales history", with customers spending nearly half a million US dollars on both apps and in-app purchases on that day alone.

Apple's press release went on to boast of record-breaking sales in 2014 as well. App Store sales rose 50 percent in 2014 – and that's just in paid apps and in-app purchases, not including free apps and upgrades – and generated more than US\$10 billion in revenue for developers.

The launch of iOS 8 could have had something to do with this highly successful year. iOS 8 introduced Apple's Swift programming language and the Metal graphics technology to developers, giving them different tools to create rich, robust apps more efficiently.

Other campaigns could have contributed to this success, too, like Apple's year-end (RED) initiative where all proceeds from specific apps purchased went to the Global Fund to fight AIDS. Apple also introduced app bundles to the App Store in 2014, which lets developers package their apps together for users to purchase at a lower price than if bought individually.

"We're so proud of the creativity and innovation developers bring to the apps they create for iOS users and that the developer community has now earned over \$25 billion," said Eddy Cue, Apple's senior vice president of Internet Software and Services, in the press release.

APPLE RAKED IN OVER US\$4.3 BILLION FROM APP STORE IN 2014

Apple reported in January that gross revenue from its iOS App Store for 2014 was up 50 percent from 2013, although according to the numbers, sales were up only slightly from the 12 months prior to June 2014, when it last hinted at revenue.

In a press release the company said that the iPhone and iPad App Store "generated over US\$10 billion in revenue for developers".

Apple typically couches its publicly disclosed numbers with enough wiggle room that can be difficult to parse its financials. That's the case here.

On one hand, because Apple skims 30 percent off the top, US\$10 billion to developers would represent a total of US\$14.3 billion in gross revenue, with Apple retaining US\$4.3 billion.

However, a year ago, Apple said App Store sales were "over US\$10 billion", implying that US\$7 billion went to developers and it kept US\$3 billion.

So its contention that "billings rose 50 percent" from 2013 would mean revenue climbed to US\$15 billion, putting Apple's slice of the pie at US\$4.5 billion with developers receiving the remaining US\$10.5 billion.

Analysts tried to figure out what Apple's numbers meant, and whether they showed significant growth in the second half of 2014.

"Apple has effectively stated trailing 12m app store rev was \$10bn in both June 2014 and December 2014," tweeted Benedict

Evans of Andreessen Horowitz. "Slowing growth or too much rounding?"

Evans was referring to comments Apple made during its earnings conference call for the quarter that ended 30 June, when CFO (chief financial officer) Luca Maestri said, "Our developers have now earned over \$20 billion for sales of their apps through the App Store, nearly half of which has been earned in the past 12 months."

Jan Dawson, principal analyst at Jackdaw Research, interprets the June 2014 and January 2015 statements – each saying that developers got approximately \$10 billion in the preceding 12 months – as indicating a slowing of growth.

"The App Store number does seem to be slowing somewhat at around \$2.5 billion per quarter to developers each of the last four quarters," Dawson says.

Apple's \$4.3 billion to \$4.5 billion take may have been real money – more than its total revenue for the 2005 fiscal year, Evans observes – but it represented just over two percent of the company's total revenue for fiscal 2014.

APPLE PATENT REVEALS PLANS FOR A GOPRO COMPETITOR

GoPro shareholders began panicking in January after Apple's patent application for a wearable camera was approved. One look at Apple's plans shows why – the application details a GoPro-like wearable perfect for action shots and underwater recording. Apple even takes aim at GoPro in the patent filing.

Apple may not ever make a wearable camera, but if it does, it'll be a GoPro on steroids. The patent covers a camera that can be mounted to bike helmets and scuba masks or fastened to motorcycles and surfboards. The patent also details plans for waterproofing so an iPhone could be used to take underwater snapshots.

Apple critiqued GoPro's action cameras in the filing, specifically the HD Hero2 camera sold as part of an 'Outdoor edition' bundle. In a copy of the filing obtained by PatentlyApple (bit.ly/14Ugcde), Apple said the Hero2's single image capture system causes "excessive wind resistance" and has a large profile that sticks out from the camera, making it "more susceptible to damage." Apple aims to create a camera that can be used in a conventional handheld mode and a mounted mode with high-quality results both ways.

The patent covers an image sensor, optical system and a remote control to capture images that would enter energy-saving mode to conserve power. Apple criticised existing remote control accessories for their short battery life. A figure of the remote control accessory

included with the filing and published by PatentlyApple shows a remote control camera button on a watch. If Apple follows through on its patent, you may one day control your AppleCam with Apple Watch. GoPro shares dropped more than 12 percent in the wake of the news.

INTEL, GOOGLE, APPLE TRY AGAIN TO SETTLE EMPLOYEE ANTITRUST LAWSUIT

Intel and three other tech companies, accused of conspiring to prevent the poaching of each other's employees, reached a new settlement with the workers in January.

Judge Lucy Koh of the US District, last year rejected a proposed settlement of

US\$324.5 million with the tech workers as she found it was too low. Google, Apple, Adobe Systems and Intel appealed her decision in September.

The tech workers who filed the suit alleged that Google, Apple, Intel, Adobe, Intuit, Lucasfilm and Pixar put each other's employees off-limits to the other companies by introducing measures such as 'do-not-cold-call' lists. The tech workers alleged an 'overarching conspiracy' to fix and suppress employee compensation and to restrict employee mobility.

The companies had earlier settled similar charges in 2010 with the US Department of Justice but admitted no wrongdoing. They agreed not to ban cold calling and enter into any agreements that prevent competition for employees. The employees said that the government was unable to compensate the victims of the conspiracy, which was the reason they were filing a suit.

Intuit, Lucasfilm and Pixar have previously settled with the workers for about US\$20 million.

A court filing in May 2013 in the case has led to more class action lawsuits that allege secret no-poaching deals among tech companies to keep salaries low.

The new suits against Microsoft, Oracle and Ask.com appear to refer to a memo that names a large number of companies said to have arrived at special arrangements with Google to prevent poaching of staff. Oracle and Microsoft said in their defence that the DOJ (Department of Justice) had not seen fit to prosecute them before 2010.

The new settlement would require the approval of the court. ↗



And now son we wait...

Damien Witham has sent in this month's winning picture, starring two St Andrew's Cross spiders.

Snapped in the gardens surrounding Damien's house, these two St Andrew's Cross spiders were busy putting the finishing touches on their distinctive cross web when Damien took his shot.

Re-mulching at the time, Damien snapped his photo on an iPhone 6 around 15cm away from the pair without any zoom and it turned out really well.

"I've taken a few photos of these spiders and others over the years, but this is the first time I've seen two on the same web, and they appear to be mother and son. Being a parent myself, I couldn't resist getting a closer look," Damien says.

After often seeing the amazing spiders when gardening, Damien did a little research and now can't seem to stop seeing them all over the place.

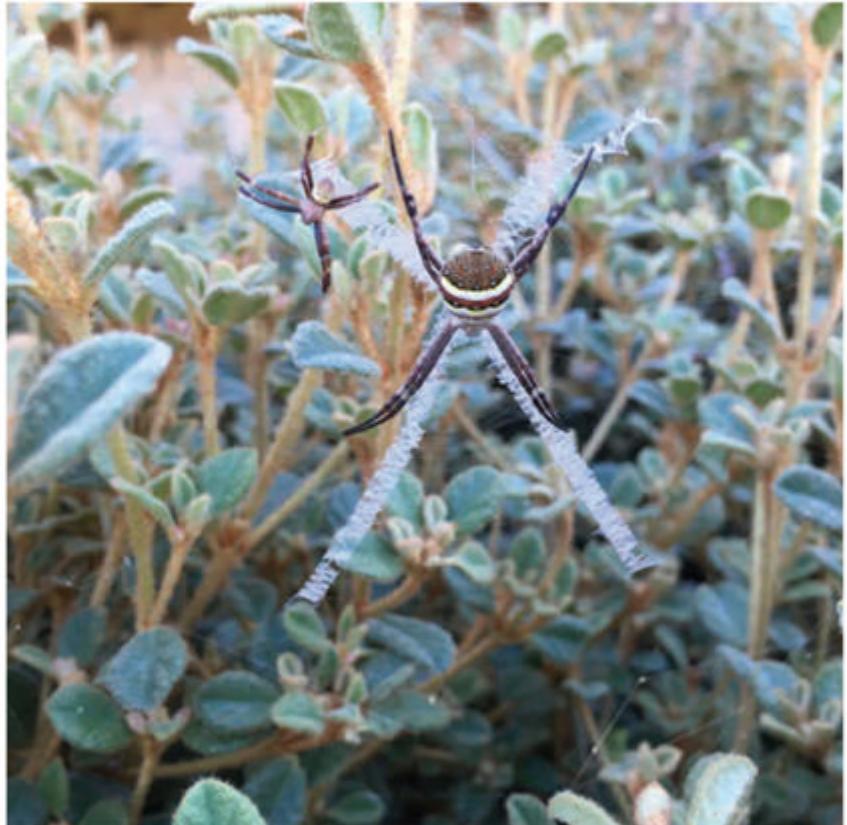
"They are unmistakable. Once you know about them, you kind of see them everywhere. What sets them apart is the way they use their legs and their web to form a cross that resembles the Scottish flag. They make a cross on the web, then align their legs to create the illusion that they are a lot bigger than they really are.

"Although the reason they do [this] is still a mystery. The cross creates a shine in the sunlight, so is it to attract flying

insects? Or is to deter birds from flying through it? Or is it simply to strengthen the web? Whatever the reason, I think the St Andrew's Cross is amazing."

Using Apple's Camera app, Damien has been a long-time iPhone photographer.

"I carry my phone in my pocket everywhere. I've had an iPhone for over six years and the quality has been getting better and better. I love the fact that if I see something, like an interesting insect, I can very quickly get a photo of it so I can then research and find out what it is. I do this all the time. I'm always yelling out to the kids, 'Hey, come and take a look at this!'"



In iSnap we're on the lookout for some of the best photographs being taken with iOS devices. Submit your favourites to macworld@macworld.com.au for your chance to be featured in the online iSnap gallery (www.macworld.com.au/isnap). Each month's winner will win a prize and appear on this page!

This month's prize is a Monopod (\$34.99) and a Shutter Remote (\$54.99) from iStabilizer. The iStabilizer Monopod is an extendable, handheld mount for smartphones and POV cameras including GoPro, Countour, Drift and light camcorders.

The Shutter Remote offers control over your device via Bluetooth. The remote allows users to capture photos, change music tracks and volume, play and pause movies on an iOS device or Mac, activate Siri and initiate navigation.

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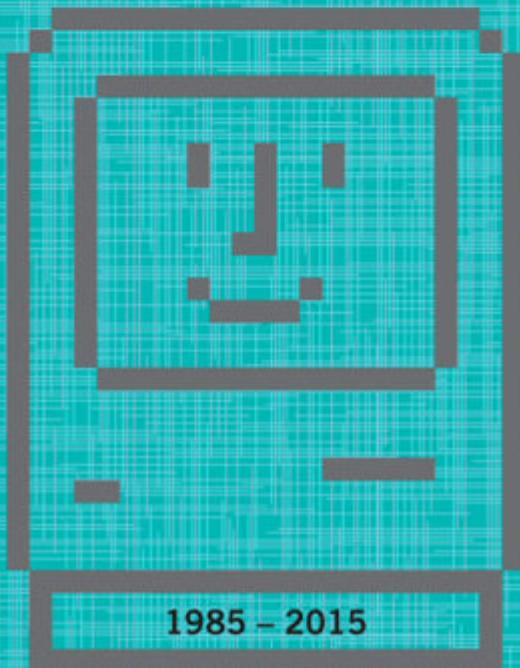


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Apple Watch and Android Wear: same destination, different paths

The more we learn about the Apple Watch, the less it seems like a revolutionary departure from the existing wearable market.

In particular, it has a lot of overlap with Android Wear, Google's own wearable platform.

That much became clear when Apple released its design guidelines for third-party apps. Parsing the guidelines alongside those for Android Wear reveals two like-minded approaches: quick, contextual interactions are paired with data collection from sensors.

The two companies even use similar language at times:

"A Watch app complements your iOS app; it does not replace it," Apple writes. "If you measure interactions with your iOS app in minutes, you can expect interactions with your Watch app to be measured in seconds. So interactions need to be brief and interfaces need to be simple."

"A classic wrist watch is designed to let you see the time in a split second

and get on with what you were doing," Google writes. "Designing for Android Wear is no different. The less time it takes to use your software, the more time the user can be present in whatever they are doing. Android wear is fast, sharp and immediate."

This isn't to say Android Wear and the Apple Watch are exactly the same. Even if they're trying to arrive at the same place, they manage to head down diverging paths along the way.

GLANCES AND NOTIFICATIONS

On a basic level, the Apple Watch and Android Wear are both driven by actionable notifications – such as the ability to delete an email or respond to a message straight from the watch – as well as information cards that you can quickly glance at. The primary difference appears to be in the way everything's laid out.

Android Wear's interface is like a big spinal cord, with glanceable cards, actionable notifications and even

music playback controls mashed up into a single, vertical menu. Swiping to the right of any notification brings up potential actions (such as delete and reply buttons for email). In some cases you can launch a proper watch app from its corresponding notification.

The Apple Watch takes a more tentacled approach. Instead of combining glances and notifications into a single column, the two are distinct entities. When you want a quick hit of simple information, such as a current stock price or sports score, you swipe up to the Glances section, then swipe across to the info card you're looking for. Tapping on a Glance leads to its corresponding app if you want to do more.

Notifications on the Apple Watch are more fleeting, popping up with only minimal information at first. If you tap the screen or keep your wrist raised, more information and possible actions appear. Otherwise, the notification disappears.

There are pros and cons to both approaches. Android Wear's single stack of cards seems simpler to navigate, and it allows apps to push out glanceable information only when it's going to be helpful (such as when a sports score changes). On the other hand, Apple gives users more control over what they're looking at and more privacy for incoming notifications. Apple's interface also prevents users from having a big pile up of unaddressed notifications to wade through.

Both systems tackle the same overarching concepts in slightly different ways.

LAUNCHING APPS: INCIDENTAL VERSUS INTENTIONAL

The two platforms diverge even more dramatically in the way you're asked to launch deeper apps, such as to-do lists, music players and fitness trackers. The Apple Watch has a traditional home screen for this purpose, accessed by tapping the 'Digital Crown' on the right side the watch.

Android Wear has an app launcher as well, but it's obfuscated by design. To access it, you have to tap the screen from the main watch face, then swipe all the way down to the bottom of a list of options. It's possible to launch apps with a voice command, but Google's guidelines make it clear that most apps should jump into the notification stack automatically, presenting themselves at just the right moment based on context signals such as time, location or physical activity.

Apps on Android Wear and the Apple Watch will also have a more fundamental difference, at least at launch. On the Apple Watch, third-party apps will require a paired smartphone to operate until Apple allows for fully native apps later in 2015. (It's not clear which of Apple's own apps, if any, will be subject to these restrictions.) By offloading computational tasks and storage to the phone, Apple Watch

apps can run more smoothly with less drain on battery life.

Android Wear apps can be loaded directly on the watch, and while most apps require a phone connection to be useful, the system already allows for the independent operation of basic utilities (such as calculators and checklists) and offline music playback. Android Wear watches with GPS on board can also keep track of your location, speed and distance travelled without a paired smartphone.

It seems likely that the differences in these approaches will become less pronounced over time. A future update for Android Wear is rumoured to make launching apps easier, and Apple Watch apps may not need to rely so much on a paired phone as Apple's hardware becomes more efficient.

HARDWARE DEPARTURES

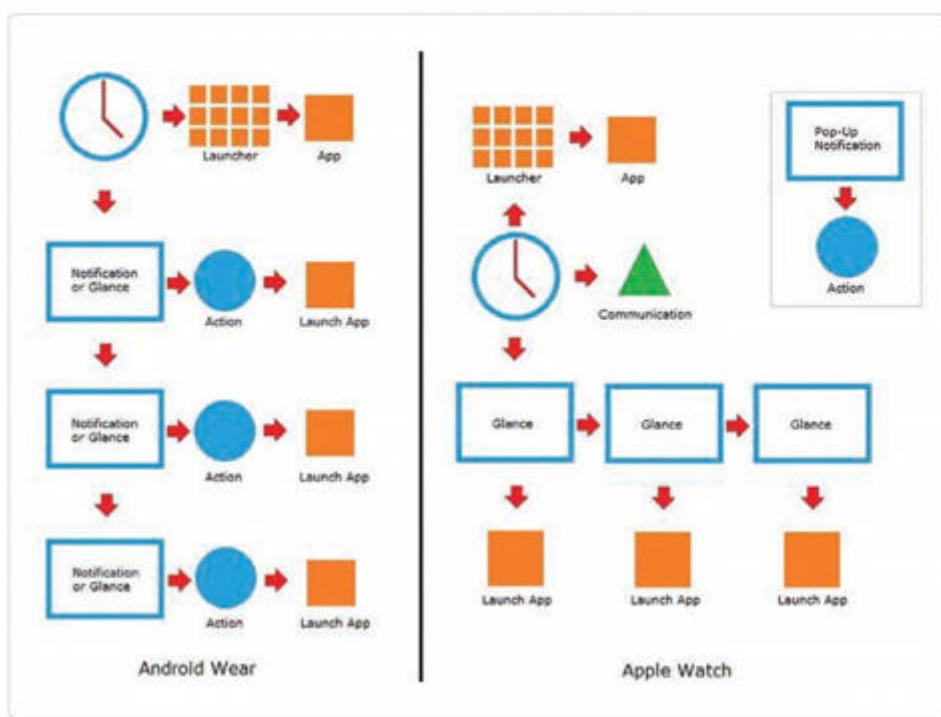
Several other factors set Android Wear and Apple Watch apart. The most obvious difference is the hardware itself, with Apple focusing on a single device (in two sizes) and Google working with hardware partners on

Visualised.
Android
Wear and
Apple Watch
interface
flows.

a wide variety of shapes, sizes and prices. By controlling the hardware, Apple is placing a bigger bet on new interaction models, such as the Digital Crown for non-touch controls and Force Touch for pressure-sensitive touch commands.

The Apple Watch also has the advantage in mobile payments through its support for Apple Pay, which is already gaining traction among iPhone users in the US. Google has its own mobile wallet service, but hasn't announced Android Wear support, and no current watches have the necessary NFC (near field communication) capabilities built-in.

But despite all these differences, the Apple Watch and Android Wear don't seem fundamentally different. They both, in essence, try to save us the trouble of using our phones by delivering quick bursts of information, and acting as collectors of data (fitness data in particular) to help us live richer lives. In doing so, they ensure that the Apple-Google rivalry will be just as fierce on wearables as it has been on smartphones. ☺



GETTING READY FOR THE SCHOOL YEAR

As summer draws to a close, the new school year arrives. And with that, the questions arise: what technology do the students need? Which apps will help them stay on top of their workload? Do they require accessories to aid their gadgets? And can you answer those questions while saving money?

ANTHONY CARUANA takes a look.



It's that time of the year – when the fatigue of keeping the kids entertained over the summer is almost overwhelming and you've got a to-do list that's longer than your arm as you get everything together for the start of another school year.

There are books to buy, apps to download, school bags and lunch boxes to find from last year – hopefully without a leftover banana or sandwich from December buried inside – and a million other tasks to get through.

While we can't help you with six-week-old mouldy food, we can offer some advice on getting ready for school in a few other ways.

SAVING SOME MONEY

One of the most difficult parts of the back to school period is dealing with the significant start-up cost of the school year. The worst case scenario is needing a new Mac or iPad, as well as the associated accessories and software.

If you're buying from Apple's App Stores for iOS or OS X you can use iTunes gift cards to load up your account. Shop around for gift cards, as many retailers offer them at significant discounts. The best we've managed to get our hands on was a short online sale through a reputable



Save on cards. Apple gift cards on sale offer great value when looking to purchase apps.



Portable. MacBook Airs are a lightweight solution with batteries lasting nine hours or longer.

retailer that sold a limited quantity of \$10 gift cards at \$2.99 each. However, you'll find many large retailers and department stores routinely offer discounts of between 25 percent and 30 percent.

Check out www.giftcardsonsale.com.au for current discounts on iTunes and other gift cards.

Shopping around for Apple hardware is also worthwhile. We're fans of shopping around and then finding a retailer that has a policy of undercutting any advertised price. We've made some significant savings that way on many occasions.

Apple's retail stores will often price match if you ask.

When buying new hardware, unless you absolutely must have the latest and greatest, there are some real bargains to be found if you consider refurbished equipment. Apple's online store has a link to its refurbished products site where you can find some good deals.

All the products sold there include a one-year warranty that can be boosted with Apple Care as well as free shipping.

There are also other used computer dealers, such as mResell, that offer great service and prices. Just make sure you do your research before handing over your hard-earned cash.

WHAT NOTEBOOK SHOULD YOU BUY?

A few years ago, the government funded the purchase of computers for many schools. That arrangement funded the supply of many thousands of computers in schools, but now, a few years later, those computers are no longer in use. As a result, many schools are now moving to a BYOD model where students supply their own computers.

With the focus on students, there are probably only two screen sizes that will

be on your radar for the computers they will be carrying between school and home. There's the 11in MacBook Air, 13in MacBook Air or 13in MacBook Pro.

Although the 15in MacBook Pro is a great machine, the extra cost, size and weight don't make it an ideal choice for students.

Once you choose between the larger and smaller displays, the decision comes to a balancing act between specifications and budget. Our advice is pretty simple. Don't skimp on memory – if your budget can handle it, make sure you get a model with 8GB. Then, get the most storage capacity you can afford. In our view, the CPU is the third priority.

Modern processors can handle pretty much anything most apps can throw at them. We tend to run out of memory and space before the processor constrains our activities.

For the majority of students, a 13in MacBook Air with 8GB of memory and 256GB of storage will cost around \$1500. While that sounds like a lot, it's less than \$10 per week if your student uses it for three full years.

A similarly equipped 11in MacBook Air will cost about \$100 less.

WHAT ABOUT AN iPad?

Many schools jumped onto the iPad bandwagon and fully embraced Apple's market-defining tablet.

If you look at Apple's market strategy with the iPad and iPad mini, it takes a three-tiered approach. Older models are kept in the market, proving a low-cost entry point. The most recent previous release is kept as a mid-level entry point with the latest model, equipped with the latest bells and whistles filling in the top end of the market. It's a 'good, better, best' approach.



Once you decide whether a full-sized iPad or an iPad mini is the best fit for your student, we'd then suggest avoiding the less expensive entry-level devices. While they are good value, Apple has limited them to lower storage capacities and they are the most likely to be left behind when a new version of iOS is released.

Assuming you're looking at the most recent or prior release models, it comes down to a balancing act between capacity and budget.

Students are likely to be creating lots of interesting content on their iPads. For this reason, we'd suggest 32GB as a minimum capacity, but if your budget can stretch to 64GB, then we'd suggest getting that.

SOFTWARE AND APPS

Having chosen the hardware that will support your child's education, it's time to consider the software.

Regardless of whether you've chosen a Mac, an iPad or both, Apple does give you a head-start. All new Macs and iPads come with free copies of Pages, Numbers and Keynote, so students can hit the ground running with their new gear.



Reminders at a glance. BusyCal combines your reminders and calendar information in a clean interface.

If the students have access to an iCloud account, then they can easily share work between devices if they save their work to Apple's cloud.

The reality is that Microsoft Office is the de facto standard when it comes to document sharing. The good news is that Microsoft Office for iOS devices is free, so students can use those applications to create content for school.

Our other must-have app for students is Evernote.

Evernote makes it easy to collect research, take pictures, create simple presentations, make notes, clip entire web pages and share what you've discovered.

As it's multi-platform, a student can collect information using their iPad or iPhone while on a field trip and then use that research on their Mac or PC when they're back at school or home.

As far as other apps go, there are hundreds of apps in the education sections of the iOS and OS X App Stores. Many are extremely well-presented and deliver information to students and teachers in very stimulating ways. However, don't get tempted to buy every well-presented app. In many cases, the same content can be found online at no cost.

Perhaps the most underemphasised app category for students is organisation. Students have a lot to balance between classes, assignments, regular homework and extracurricular activities like part-time jobs, sports and social lives. Finding a tool that works well for students can take some trial and error. While we're able to manage our work using Apple's Reminders and Calendar apps with iOS and OS X, the one thing we really miss is a single view where tasks and appointments are all displayed in one simple screen.

iOS covers this to some degree with the Notification screen that can be accessed by swiping down from the top edge of the display. OS X has a similar function, which is accessed by clicking on the icon in the top right corner of the OS X menu bar.

However, getting all that information into a single app – so you can look ahead and see what homework tasks, assignments and classes can be viewed from a single place – can be useful. BusyCal is one app that we've tried and think will fit the bill. The monthly and weekly views combine the Calendar and Reminders information so that you can, at a glance, see what the coming days and weeks are going to look like.

At \$65 from the App Store, this isn't a cheap app, but it's just US\$50 through the BusyMac website.

RESOURCES TO SUPPORT LEARNING

No two students learn in the same way. One model for learning suggests that students have three learning modes – visual, auditory and kinaesthetic. For this reason, it's important to find interesting ways to engage students that appeal to their different learning styles.

Over recent years, the trend towards gamification (the use of gaming paradigms to enhance engagement in applications) has taken hold and it can be a very effective tool to make learning more engaging and interesting. Great learning games are fun for students and reinforce positive learning outcomes.

For example, there are lots of educational games where students have to react quickly by responding to visual and auditory cues in order to achieve certain bonus levels or other incentives.

These cover maths, languages, spelling, design, problem solving – almost every learning area covered in schools from kindergarten all the way to Year 12 and beyond.

If more formal learning tools are a better match for you or the students you're responsible for, there's the iTunes U.

iTunes U is a collection of lectures and learning materials published by



433MB/s, Meet Your Keyring.

Introducing Envoy Pro mini — desktop-class SSD performance in the ultimate go-anywhere storage companion. Incredibly fast and perfectly portable for your life on the move.

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The perfect solution for any backup, audio/video, photography, or data management needs.

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OWC Helios and Helios 2

Thunderbolt 2 Expansion Chassis
Utilize up to two PCIe cards. Perfect for A/V editing, networking, storage, and more.

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OWC ThunderBay 4

Thunderbolt 2 Drive with 4-bays
Utilize each of the four internal drives independently, or select the software RAID of your choice.

Up to 24.0TB **from \$449.00**



OWC Thunderbolt 2 Dock

Expand Your Connectivity
Features: (5) USB 3.0 ports, (2) Thunderbolt 2 ports, (1) FireWire 800 port, (1) HDMI port, (1) Gigabit Ethernet port, (1) audio jack, and (1) headphone jack.

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Mini in size, but not in performance. It's the perfect size to utilize four 2.5" SSDs or hard drives, while providing performance up to 1336MB/s.

Up to 8.0TB from \$379.00

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Free and mobile. iTunes U is a library of learning resources from institutions around the world.

hundreds of the most respected teachers and universities across the world. You can freely download and watch classes in subjects ranging from software development to ancient history, languages and physics – if you can think of a subject, there are probably a few different classes you can download and follow.

iTunes U content is accessed via iTunes on a Mac or by using the free apps available for the iPad, iPhone or iPod touch, so you can work through a subject while offline – a handy idea if you're easily distracted.

When looking for apps to support learning, don't limit your search to the education section of the different app stores. You'll find great apps in the games, medical and entertainment areas as well, although it may take a little more effort to find suitable apps.

It's also worth doing some online sleuthing to find what apps are recommended by different education departments and schools. Many schools have blogs where they list the apps they use and even blog about their suitability for different students or whether they're effective tools.

CHARGING AND MANAGEMENT
Many schools choose to deploy iPads as a shared classroom resource – much like a tub of books in the old days. The challenge is keeping those iPads charged, up-to-date with the latest apps and ready for the next class.

The Bretford PowerSync Tray for iPad with Lightning Connector (\$1500 from Apple Store) can hold up to 10 iPads. If your school is using Apple's free iPad



Configurator, you can use the PowerSync Tray for iPad to update and deploy apps to all of the iPads housed on the tray simultaneously.

Bretford also offers carts that can hold as many as 40 iPads. In addition, it has an app, PowerSync+, which allows you to manage each of the iPads in some of its tray systems so you can check on the charging status of each iPad, as well as the status of any Configurator workflows that are in progress.

Local manufacturer PC Locs (www.pclocs.com.au) has been making notebook and tablet storage trolleys for several years. It has a series of different carts, such as the Aero and Carrier ranges. These securely store and charge as many as 60 iPads at one time – ideal for school libraries and labs.

It also offers the iQ Sync Charge Boxes. These are devices that provide 16 2.1amp USB ports for charging and syncing iPads.

iPAD CASES

A walk through any shopping centre will reveal a multitude of different iPad cases appealing to almost every taste and preference. For student use, we highly recommend looking at cases for their protective capability rather than aesthetic value.



Protect it. The STM Studio, available in light orange, black and purple, features a front cover that can double as a stand.

Look for cases that offer solid protection at the corners – if an iPad hits the ground on a corner, this can shatter a screen.

The Griffin Survivor All-Terrain Case (\$80, www.griffintechnology.com) is a good example, albeit possibly a little extreme for most students. The Survivor is built to the US military's MIL-STD-810F ruggedness standard. It's made of shatter-resistant polycarbonate with shock-resistant silicone cladding and there's a built-in screen protector that seals the iPad's display from the environment. There's also a kickstand on the back, so that students can easily prop their iPad up while watching video or reading.

We've got an OtterBox case for our iPhone that we use when bike riding or at the beach, and can vouch for its protective capability. OtterBox's iPad Defender Case (\$90, www.otterbox.com) is made of high-impact polycarbonate and includes a foam interior that delivers added shock absorption and protects the back of your iPad from scratches. Despite not being waterproof – there are other cases in OtterBox's range if you need that capability – it should fit the bill for most students.

If your needs are a little less extreme, there are many other options to consider. For example, the Belkin Stripe Cover for iPad (\$50, www.belkin.com/au) is an elegant case with solid corners and protection for the screen and back when the iPad is stuffed into a school bag.

Similarly, the STM Studio (\$60, www.stmbags.com.au) is popular with schools as the cases come in several colours and offer solid protection. Like Apple's Smart Case, the STM Studio's front cover can fold and act as a stand, so that the iPad can be used for viewing content or to provide a more comfortable typing angle.



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MACWORLD.COM.AU/mRESELL

iPAD KEYBOARDS

Keyboards are very personal things. Finding one that works well and is comfortable can take some trial and error. We'd suggest trying a few out in a store before committing to a purchase. We've tried some inexpensive units in the past and found the keys to be very spongy, with small keys that meant we spent a lot of time fixing errors.

For our money, Logitech's Ultrathin Keyboard Cover (\$99, www.logitech.com/en-au) is simply excellent. It clips onto the iPad's magnetic edge and acts as a protective cover for the iPad's display. There's a channel about two-thirds of the way back, just beyond the row of shortcut keys that your iPads sits in, so you can type with the screen propped up at a comfortable angle.

The Zagg Backlit Key Folio (\$139, www.zagg.com) is also a great option, as

it allows you to adjust the iPad's viewing angle over a 135-degree range. As the iPad sits right at the back of the Key Folio it also provides a larger typing area than many other keyboards. In fact, when being used, the Key Folio makes your iPad look like a smaller MacBook Air.

MAC CASES

Carrying a computer back and forth between home and school requires a decent bag that won't leave your student with a sore back and protects the computer. It's tempting to just put the MacBook Pro or MacBook Air in a sleeve and shove it in the bag among the books. But, having seen students and how they treat their school bags, we suggest a more rigorous approach.

It's also worth noting that a decent backpack is likely to set you back a little more than you may expect. But a well-

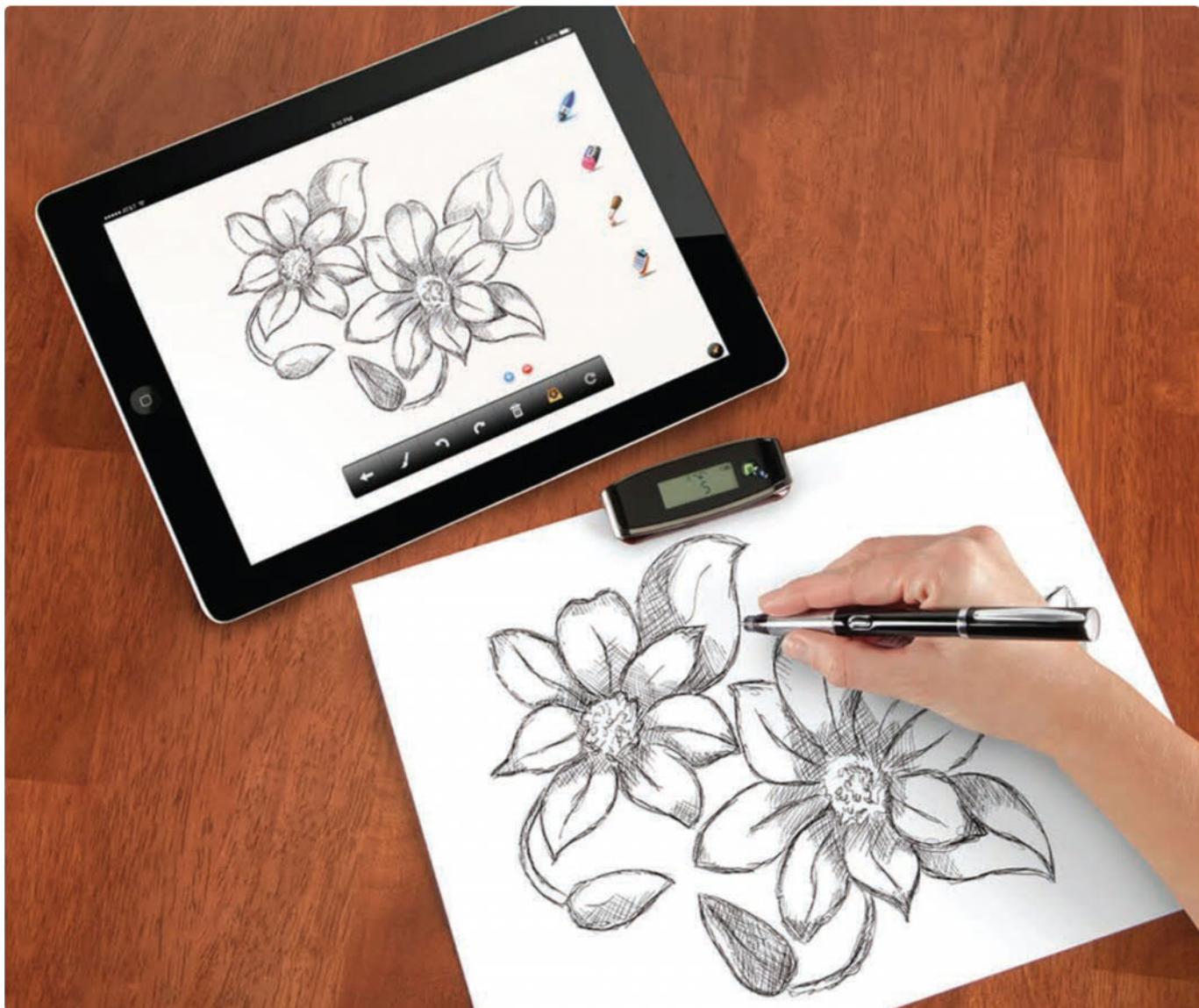
made unit will see your student through most of their school life and possibly the years beyond. So, think of it as a long-term investment.

Look for a bag that has a well-padded base. Students often drop their bags. This can result in percussive forces hitting the computer, causing damage. Many satchels and backpacks have specific compartments, with extra padding, for safely housing portable computers.

For example, the Thule 15in Stravan Backpack (\$130, www.thule.com.au) can safely house a MacBook Pro in a well-padded pocket that zips separately from the backpack's main compartment. As it's made for larger devices, there's plenty of room for books and the other bits and pieces students carry between home and school. It also boasts a storm cover, so that it can be waterproofed for walks home in the rain.



Different angles. The Zagg Backlit Key Folio can be adjusted over a 135-degree range and boasts a sizeable keyboard.



If a school insists that students use a standard issue bag as it's part of the school uniform, then we'd suggest looking at shell cases and slip cases. Speck makes shell cases in a variety of different colours and sizes to match all of Apple's different notebooks. They retail for around \$60 (www.speckproducts.com).

While there are hundreds of different slip cases and shells available, we really like the Twelve South 13in BookBook for MacBook Air (\$90, www.twelvesouth.com). It offers solid protection for the notebook computer without looking like a regular case. Twelve South has fashioned an accessory that looks like an old book, camouflaging the MacBook Air. The MacBook Air can be used while in the BookBook, making it both protective and functional.

GADGETS

One of the great things about modern computers is the ability to connect all sorts of different devices over USB. While some can be a lot of fun (USB Nerf Missile Launcher, anyone?), there are also some serious educational tools that can be connected to your MacBook Air or MacBook Pro.

USB microscopes can be great tools for inquisitive minds. When purchasing a USB microscope, what you're really getting is a USB camera with some fancy lenses. However, one of the hidden challenges is that many of these devices require extra software to work with your Mac. We suggest reading the fine print and doing some research before buying.

For the aspiring artist, there's the Instant Transmitting Paper to iPad Pen

(\$170, www.hammacher.com). This special pen and transmitter (pictured above) lets you draw on regular paper. You attach a small transmitter to the top of the page you're working on and the output from the pen is sent to your iOS device. The transmitter can hold up to 100 pages of text.

Many teachers and parents will lament how students can lose concentration or come up with a thousand excuses for cutting a study session short. The Study Ball (\$115) may just be the cure. This 9kg ball is 'chained' to a student's ankle with a timer. The parent sets the timer for a defined period of time. Once that time elapses, the chain is released. If you've been looking for a way to tether a student to their desk, this may be the answer. ☺



MAC GEMS

NEW SOFTWARE FROM THE MAC APP STORE



ENDLESS LEGEND

GAMES

Amplitude Studios

US\$34.99

For years, every 4X game we've come across has met with the same exact response: "Yeah, yeah, it's good, but it's no *Civilization*." Until now. *Endless Legend* is a fantasy-themed 4X game that plays out fundamentally similar to *Civilization V*, which is to say it plays out fundamentally similar to every other modern 4X game. However, *Endless Legend* makes key tweaks to factions, combat, tech hubs and methods of expansion that dramatically change how the game plays, and mostly for the better. *Endless Legend*'s art style, which combines pastel colours with a tilt-shift effect, makes the whole thing look like an exceedingly complicated board game. It's gorgeous. *Endless Legend* isn't perfect, but it's the strongest *Civilization* competitor in years. Available via www.steampowered.com.



**TOP
PICK**



ESSENTIAL ANATOMY

MEDICAL

3D4Medical

\$42.99



A great tool for medical students and professionals – and for those curious about the human body – *Essential Anatomy 5* offers an interactive look at what goes under a person's skin. The app, which comes with both male and

female models, offers high-quality graphics, easy navigation and location of important features, and a number of advanced features that can be unlocked using in-app purchases.

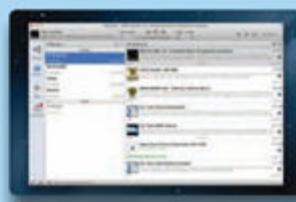


DOWNCast

NEWS

Jamawkinaw Enterprises

\$12.99



Jamawkinaw Enterprises' *Downcast* brings the company's popular podcast software, previously only available on iOS, to your Mac. The app offers everything you need to listen to your favourite shows,

from automatic podcast downloads via password protected feeds to creating smart playlists, and can sync to its siblings via iCloud or using Jamawkinaw's own services.



MOUSEPOSÉ

UTILITIES

Boinx Software

\$12.99



Boinx Software's *Mouseposé* adds a number of on-screen visual effects associated with keyboard and mouse events. The app, ideal for presentations and webcasts, can highlight the location of your cursor, play a special animation when you click your mouse button and even display each key you press in big, bold letters on the screen.



NIFTY SAVINGS GOAL

FINANCE

The Blue Plum Software

\$2.49



If your aim is to save a bit of dough, Blue Plum Software's \$2.49 *Nifty Savings Goal* wants to be the tool that helps you achieve your objective. The app can tell you how long it will take you to reach a particular goal and help you budget for periods of any length.

**PARTICULARS**

UTILITIES

Glencode

\$2.49



Wondering what's going on inside your Mac? Glencode's app conveniently displays a number of technical details about your machine right on your desktop or Today panel. The app can show information about your network connection, hardware status and storage media; a convenient pop-up menu makes copying specific details – like, say, your Mac's serial number – a quick point-and-click affair.

**SNAPSELECT**

PHOTOGRAPHY

Macphun

\$18.99



We all have large photo libraries but storage space is a premium on our Macs. Macphun is taking on the headache with its new app, Snapselect. If you have disk space issues and a sizeable photo library – either scattered throughout your Mac or interrupted by duplicates and unwanted images – or simply a large library in need of a cleanout, Snapselect is an easy-to-use utility that will improve your photo management.

**WALTR**

UTILITIES

Softorino

US\$29.95

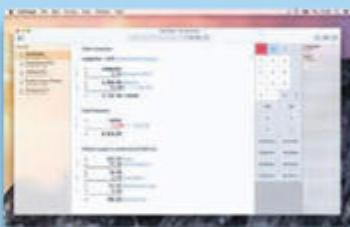
iPhones and iPads are limited in the media file formats they can play. Plenty of third-party apps will let you circumvent the restrictions manually but Waltr takes a different approach. Relieving you of the hassle of converting files, Waltr does it for you, and copies the files to your iOS devices. Drag files onto Waltr's window, and it will convert and copy files in most any media format. There are no settings and no preferences, just a window onto which you drag items. And when Waltr copies the files, you don't need to use a third-party app to play them – you can access them from Apple's Music and Videos apps, just as you do with files you've synced from iTunes or downloaded from the iTunes Store. Available via www.softorino.com.

**CALCTAPE**

FINANCE

SFR Software

\$7.49



SFR Software's Calctape combines a word processor with a calculator in a unique and powerful package. The app allows you to combine text content with calculations in a single document and supports a variety of convenient mathematical operations – including the ability to set your own 'live' variables.

**PET DOC**

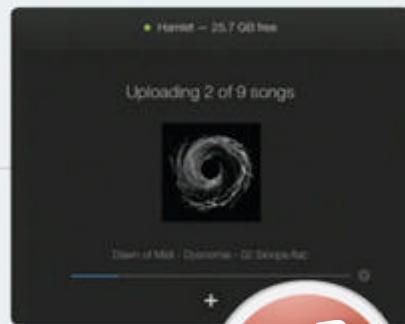
GAMES

Runesoft

\$18.99



Runesoft's Pet Doc gives you a chance to try your hand at playing veterinarian. This quirky game simulates a busy vet's office, with customers showing up alongside their pets in need of care for various kinds of ailments. As your practice grows, you can expand to new locations, offer more services and build a thriving business.

**TOP PICK**

APPLE AND IBM REVEAL 10 iOS APPS THAT AIM TO CHANGE THE WAY YOU WORK

BY CAITLIN MCGARRY

The way banks, airlines, wireless carriers and even governments do business could soon change if Apple and IBM have anything to say about it. The two companies released 10 apps in December designed to streamline business operations behind the scenes, which may lead to better service for the rest of us.

The new apps are the first wave in a lineup that's expected to include up to 100 iOS apps for business. IBM is firmly entrenched in enterprise, while Apple's presence in the halls of giant corporations has been largely unofficial, in the form of employees using their personal iPhones to send company emails. So the two companies partnered up in July last year to bring their complementary strengths to businesses on iOS.

One app called Incident Aware will give police a real-time look at maps and video from crime scenes, as well as information about victims and suspects, and better backup request capabilities.

Another, Sales Assist, is designed to help retail employees offer better service to shoppers by giving them access to customer profiles with past purchase history for improved recommendations. The app also helps staffers manage inventory.

Apple and IBM produced a pair of apps for airlines: Plan Flight for pilots offers a look at flight schedules, flight plans and crew manifests and the ability to report in-flight problems to crew on the ground. The other, Passenger+, gives flight crews information about passengers so they can tailor special offers to them.

Apple is offering AppleCare for Enterprise, a 24-hour customer service line, while IBM takes care of on-site issues.



The two companies will continue to release apps throughout 2015.

A BRIEF LOOK AT THE FIRST 10

Plan Flight (Travel and Transportation).

Addresses the major expense of all airlines – fuel – permitting pilots to view flight schedules, flight plans and crew manifests ahead of time, report issues in-flight to ground crews and make more informed decisions about discretionary fuel.

Passenger+ (Travel and Transportation).

Empowers flight crews to offer an unmatched level of personalised services to passengers in-flight – including special offers, re-booking and baggage information.

Advise & Grow (Banking and Financial Markets).

Puts bankers on premise with their small business clients, with secure authorisation to access client profiles and competitive analyses, gather analytics-driven insights to make personalised recommendations and complete secure transactions.

Trusted Advice (Banking and Financial Markets).

Allows advisors to access and manage client portfolios, gain insight from powerful predictive analytics – in the client's kitchen or at the local coffee shop, rather than the adviser's office – with full ability to test recommendations with sophisticated modelling tools all the way to complete, secure transactions.

Retention (Insurance).

Empowers agents with access to customers' profiles and history, including an analytics-driven

retention risk score as well as smart alerts, reminders and recommendations on next best steps and facilitation of key transactions like collection of e-signatures and premiums.

Case Advice (Government). Addresses the issue of workload and support among caseworkers who are making critical decisions, one family or situation at a time, on the go. The solution adjusts case priorities based on real-time analytics-driven insights and assesses risk based on predictive analysis.

Incident Aware (Government). Converts an iPhone into a vital crime prevention asset, presenting law enforcement officers with real-time access to maps and video-feeds of incident locations; information about victim status, escalation risk and crime history; and improved ability to call for back-up and supporting services.

Sales Assist (Retail). Enables associates to connect with customer profiles, make suggestions based on previous purchases and current selections, check inventory, locate items in-store and ship out-of-store items.

Pick & Pack (Retail). Combines proximity-based technology with back-end inventory systems for transformed order fulfilment.

Expert Tech (Telecommunications). Taps into native iOS capabilities including FaceTime for easy access to expertise and location services for route optimisation to deliver superior on-site service, more effective issue resolution and productivity as well as improved customer satisfaction.

facebook®

FACEBOOK TAKES ON THE ENTERPRISE WITH NEW SOCIAL NETWORK

BY SHARON GAUDIN

Facebook, the world's largest social network, is making its first move into the enterprise.

The company has confirmed that it is beginning a pilot test of a desktop service and mobile app for what's being dubbed Facebook at Work, an enterprise-level social and collaborative network for the workplace.

"Facebook at Work is a separate experience that gives employees the ability to connect and collaborate efficiently using Facebook tools – many that they're likely already using, such as News Feed, Groups, messages and events," a Facebook spokeswoman wrote in an email. "Co-workers can stay in touch with each other in the same way they stay in touch with friends and family via Facebook."

She noted that while Facebook at Work is designed to give users the look and functions they're familiar with on their social network, this service will be separate.

Employees' documents or information shared on Facebook at Work will not be connected to their personal Facebook pages. "The info shared among employees is only accessible to people in the company," the spokeswoman added.

Facebook is testing the new service with a few partners.

"The enterprise market is an important one to virtually every single major software company," says Patrick Moorhead, an analyst with Moor Insights & Strategy. "As the enterprise market is generally seen as a more profitable one, this will give Facebook an opportunity to drive up their profitability."

With its success in social media, Facebook should have plenty to offer a company that wants to help workers collaborate.

"Consider what Facebook brings to the table for the enterprise customer," says Dan Olds, an analyst with the Gabriel Consulting Group. "First, Facebook absolutely knows how to run a social network from a technical standpoint. They know how to make it reliable, secure and how to scale it.

They also know the feature mix and content that gets people engaged with the network and coming back for more."

The enterprise could be a big new lucrative market for Facebook.

"It will be very interesting to see the business model underpinning this effort," adds Olds. "Will it be a purely pay-to-play, where a corporation essentially rents a Facebook instance for use by their employees alone? Or will there be an option where advertising from outsiders could be used to defray the cost of the corporate service? How much do you think a luxury car manufacturer or a large multinational bank would pay to have a sidebar ad on the company Facebook site?"

Of course, there is the risk that effort could fail if companies don't trust Facebook, which has had a history of privacy issues with users' information.

"I don't think Facebook is trusted enough to pull this off," Olds says. "There are far more concerns about privacy with business services, and folks don't believe Facebook is focused enough on security. Facebook's brand just isn't a business but a consumer brand."

On the other hand, Zeus Kerravala, an analyst with ZK Research, says Facebook is onto a great idea.

"Think about it. Fifteen years ago, the first thing we did when we woke up was check voice mail," he says. "Five years ago the first thing we did was check email. Today, we check our social feed. Now with Facebook at Work, we can check our work feeds. We can organise ourselves by projects instead of social groups. Instead of sending co-workers email, we'll message them."

Using a network to collaborate in the office – especially one that so many people are familiar with – is a better way to work, according to Kerravala.

However, if Facebook at Work fails, it could be a big stumble for the company.

"Well it's a revenue path they don't have right now, so if they fail, it's a short-term blip," he says. "Long-term it could be a bigger problem because it could limit their growth. And I will say that serving consumers and businesses is very difficult. Very few companies can do both."



FOUR TEXT SKILLS EVERY MAC USER SHOULD HAVE

BY JOE KISSELL

The new year is well underway. Although I'm not much for resolutions, if you're aiming to boost your productivity, I'd like to suggest learning (or brushing up on) four key skills. They all involve working with text and each of them will benefit almost any Mac user (and, for that matter, almost any computer user, period).

WRITE IN MARKDOWN

If your work involves writing of almost any kind – blog posts, articles, books or even academic papers – a couple of hours spent learning the basics of Markdown will pay huge dividends.

Many major publications and blogging platforms (including WordPress) support this powerful yet lightweight method of text formatting. You mark up plain text files using simple tags (which are much friendlier and more readable than HTML) and then a behind-the-scenes converter can render that text as a fully formatted document in HTML, PDF, EPUB or other format.

For example, if you wanted to insert a clickable link using raw HTML, you'd have to do it like this:

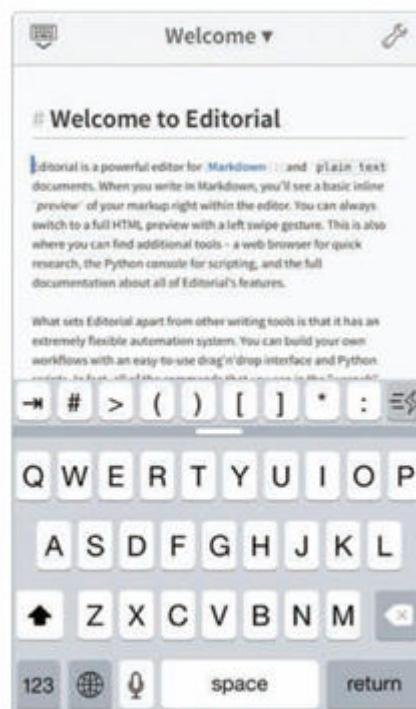
Macworld Australia

But in Markdown, it's much simpler:

[Macworld Australia]
(<http://www.macworld.com.au/>)

In all likelihood you'll quickly get the gist of Markdown just by looking at Markdown creator John Gruber's Markdown page (www.daringfireball.net/projects/markdown), but you may find it more fun to use the interactive Markdown Tutorial website (www.markdowntutorial.com) instead.

The beauty of Markdown is that because it's based on plain text, you can



Simple style. Editorial for iOS features syntax styling, Markdown shortcuts and a built-in preview pane for Markdown documents.

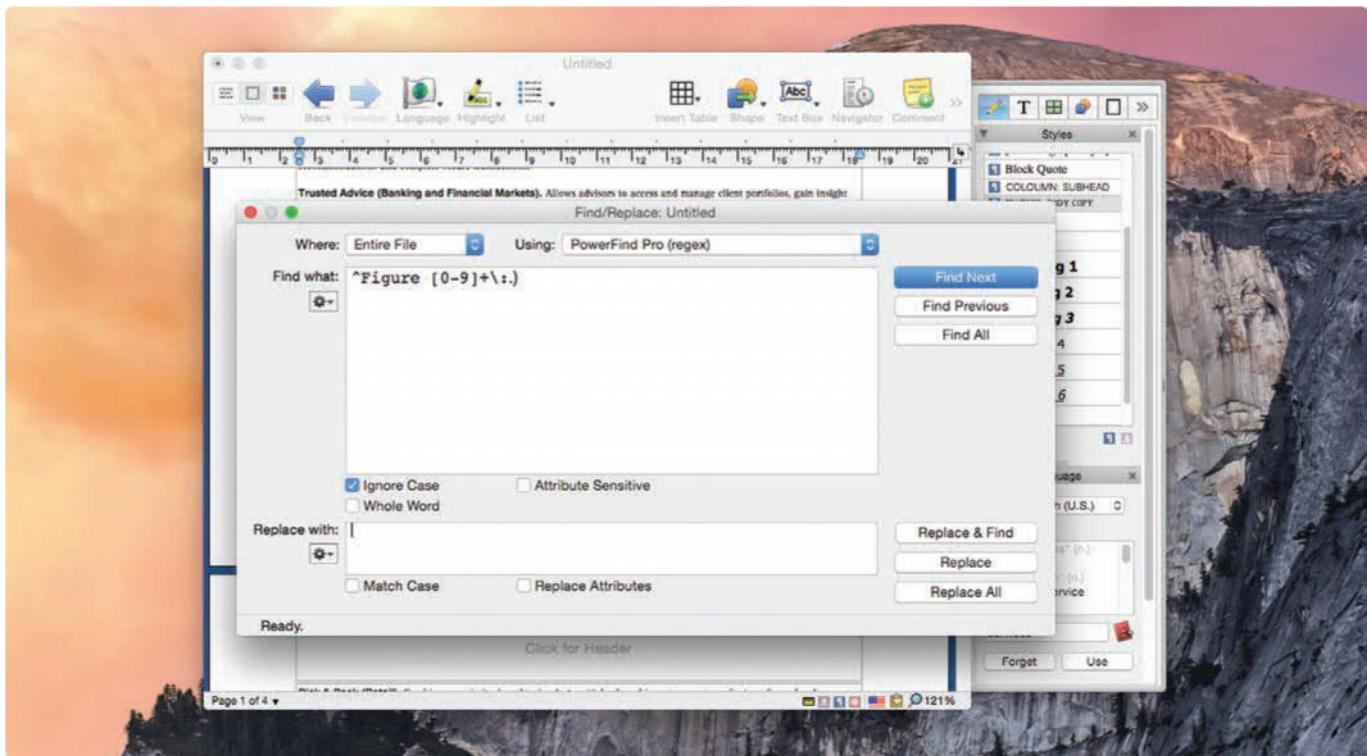
use virtually any word processor or text editor, on any platform, to write and edit – without sacrificing the richness of full formatting in the final product. I generally work in unadorned Markdown using BBEdit or Nisus Writer Pro, but if you want extra bells and whistles – such as a live preview of the formatted output, shortcuts for adding tags or syntax colouring – you can find innumerable Markdown editors and utilities in the Mac or iOS App Store. A few examples of highly-rated Markdown apps are Brett Terpstra's Marked 2, Information Architects' iA Writer for OS X and iOS, and omz:software's Editorial.

You're bound to encounter numerous variants of John Gruber's original Markdown specification that add features not supported in the original (such as tables, footnotes and definition lists) or follow stricter interpretation rules. But the core features are pretty much the same in every implementation and once you know the basics, you can easily adapt to alternative versions if the need arises.

USE REGULAR EXPRESSIONS

On countless occasions you've undoubtedly used Spotlight to search for a file on your Mac or your word processor's Find and Replace feature to locate or change text. But sometimes a simple search doesn't cut it, even with the addition of simple wildcards like ? for any single character or * for multiple characters. For example, what if I want to find every instance of a caption in a book I'm working on – something like "Figure 42: Blah blah blah" and make just the figure number (and the trailing colon) bold – but not touch any references to those figures (like "see Figure 42") in the body text?

In cases like these, which I encounter on a daily basis, I use a regular expression (or 'regex' for short), which is a sort of formula, based on a flexible system of wildcards, that lets me identify nearly any sort of textual pattern. (A regex for the word Figure, followed by a space, one or more digits, and a colon – but only if it appears at the beginning of a line – is 'Figure [0-9]+:'.)



Find it. Nisus Writer has the best implementation of regex-based find and replace we've ever seen.

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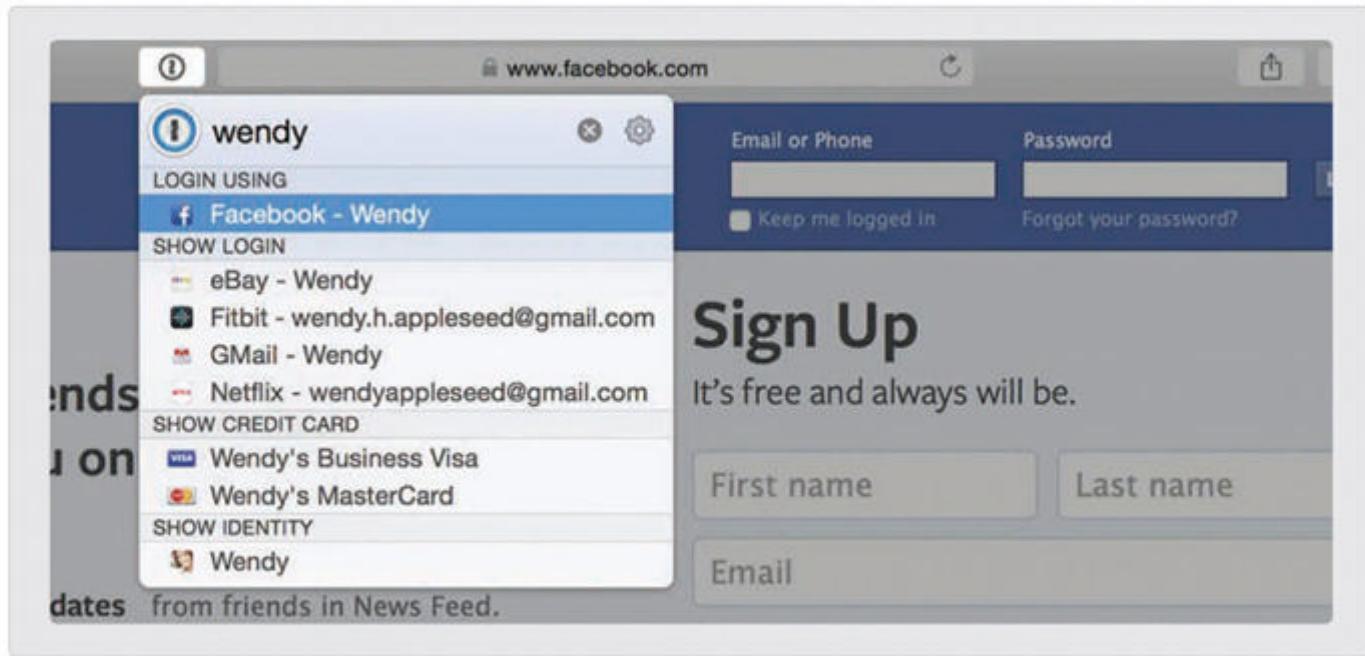
WHEN IS THE TRAINING?

- Every month on the 1st Monday of the month. **Custom, private training in groups** is available.

FREE OF CHARGE!

See our **super lab** in North Sydney with our **class-100 clean room** and training room dedicated to training worldwide law enforcement and government agencies computer forensic teams. Come along for a free tour. Apple employee ID required to gain access.





Strong security. AgileBits' 1Password offers ease of use but at a price.

The best implementation of regex I've ever seen is in Nisus Software's Nisus Writer Pro (a less powerful version is found in Nisus Writer Express). Other apps that support regex include Bare Bones Software's TextWrangler and BBEdit, Peter Borg's Smultron and Nikolai Krill's Patterns. You can also employ regular expressions to find files on your Mac using the grep command-line utility in Terminal.

A great way to teach yourself the ins and outs of regex is to use an interactive website that shows you matching text in real time as you change your input. Sites that do this include regexpal (regexpal.com), RegexOne (www.regexone.com) and RegExr (www.regexr.com).

USE BOOLEAN EXPRESSIONS

Continuing the theme of identifying patterns, sometimes it's not a sequence of characters or words you're looking for but rather a logical combination of terms within a file. For example, I may want to find any email message that contains the word 'apple' but only if it also has a term that suggests a dessert, such as 'pie', 'cobbler' or 'whipped cream.' Whenever you're looking for a file, message, contact

or other item that contains this or that, this and that, or some other logical combination such as "(this or that) and the other thing but not something else", you want a Boolean expression.

A Boolean expression uses the logical terms AND, OR and NOT (often along with parentheses and quotation marks) to come up with a 'true' or 'false' statement. Search for "sticks OR stones" and you'll match anything that has either term; search for "sticks AND stones" and you'll match only items that contain both. For the most part, it's that simple.

You can use Boolean expressions in Spotlight, Mail rules, Calendar searches and many third-party apps. Unfortunately, Boolean logic isn't currently supported in Contacts, iTunes or the App Store.

CREATE A SECURE PASSWORD

A good password – one that will resist almost any attempt at cracking – should be long and unguessable, with a combination of uppercase and lowercase letters, digits and punctuation. But when we're asked to create such passwords, many of us encounter a mental block.

You often hear mnemonic tips like "Make a long sentence and then your

password becomes the first letter of each word (and that can include capitalisation and punctuation)." That wouldn't be terrible advice if you had only one or two passwords to remember. But you probably have dozens, or maybe even hundreds. (I have well over 700 unique passwords.) One of the worst security mistakes you can make is reusing the same password in multiple places – if one password were stolen, leaked or cracked, an attacker could access all the accounts that use the same password. Keeping every password unique contains the damage.

The sane way to create and remember lots of long, random passwords is to use software that does all the work for you, syncs your passwords securely across all your devices and automatically fills them in when needed. If you use Safari on OS X and iOS, iCloud Keychain can do all this for you. If you want to use multiple browsers or non-Apple operating systems, if you want longer and stronger passwords or if you'd like additional features such as storing software licences and other personal data, you may prefer a third-party app such as AgileBits' 1Password, Dashlane Premium or LastPass. ↗



MAC IN BUSINESS ONLINE

**The home for business-minded Apple users
on macworld.com.au**

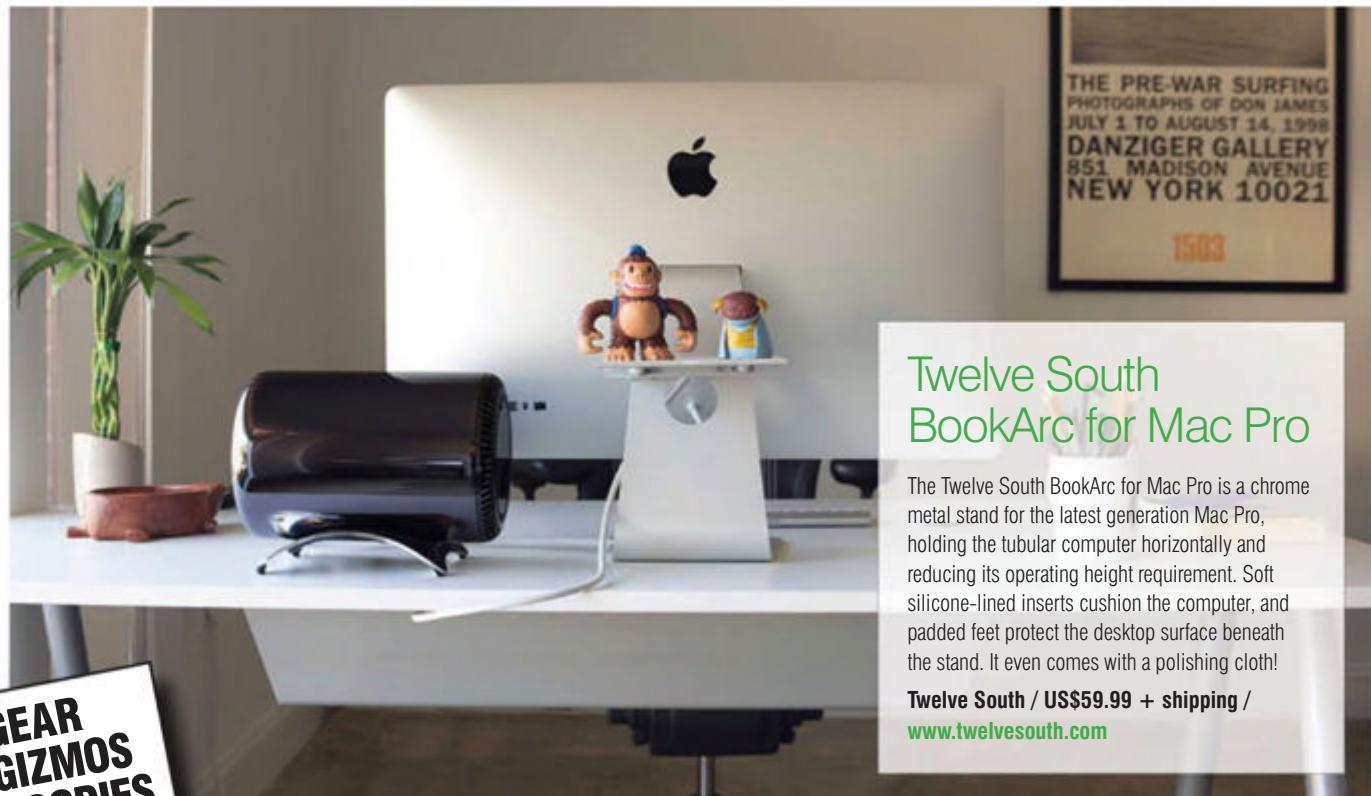
While many Mac, iPhone and iPad owners use their devices for purely personal pursuits, there are those who document, record and share as part of their day to day work. What are the most efficient and effective hardware and software options for your needs? How can you start using it immediately to drive sales, connect with colleagues, create powerful presentations, reduce communication charges?

We examine the latest technology for enterprise users to help you make the best use of your time and resources for your business.

Jonathan Stewart - Editor of Macworld Australia

We started this section as we appreciate that technology is a critical foundation for the success of your business.





Twelve South BookArc for Mac Pro

The Twelve South BookArc for Mac Pro is a chrome metal stand for the latest generation Mac Pro, holding the tubular computer horizontally and reducing its operating height requirement. Soft silicone-lined inserts cushion the computer, and padded feet protect the desktop surface beneath the stand. It even comes with a polishing cloth!

Twelve South / US\$59.99 + shipping / www.twelvesouth.com

GADGET GUIDE



Soffio MacBook Sleeve Backpack

The MacBook Sleeve Backpack is handmade in Italy from 100 percent natural leather. The Soffio backpack features a main sleeve capable of holding a 15in laptop and the front sleeve is big enough to fit an iPad mini and assorted other objects such as a charger, iPhone, earphones, etc. It can be worn as a backpack, shoulder bag or carried as a briefcase or sleeve.

Soffio
€210 + shipping
www.soffioitaly.com



Papernomad Pars 6

The Pars 6 protects your handset with a sleeve made from a combination of paper pulp and corn-based bioplastics. Tear- and water-resistant, the sleeve features an antistatic wool felt for extra padding, a pull-strap to quickly access your iPhone and a magnetic lock to keep everything secure when you're not using your iPhone.

Papernomad
US\$30 + shipping
www.papernomad.com



Mujo Leather Wallet Case for iPhone 6

Mujo's Leather Wallet Case for the iPhone 6 is designed to hold two or three cards in a slim package. Crafted from high quality vegetable-tanned leather, the case features a cutout for your smartphone's camera and provides access to all buttons and ports. Available in black or tan, the leather case also has a suede-lined interior.

Mujo
\$49.90 + shipping
www.mujo.com



Satechi F3 Smart Monitor Stand

Ever wished you could raise your desktop display and have access to more USB ports? This stand could be the answer. Satechi's F3 Smart Monitor Stand features four USB 3.0 ports, as well as headphone and microphone extension ports. Measuring 55.1 x 23.1 x 2.5cm, the stand has two height presets and is recommended for displays under 10kg.

Satechi

US\$59.99 + shipping

www.satechi.net



Moment Wide Lens and Tele Lens

At US\$99.99 each, Moment's Wide Lens and Tele Lens are for serious iPhone shutterbugs. Born on Kickstarter, they snap onto a little accessory mount that you attach to your phone with (nonpermanent) adhesive. The Wide Lens is the equivalent of 18mm and the Tele Lens is 60mm, and they're both specially designed to avoid distortion.

Moment

US\$99.99 + shipping

momentlens.co



Pad & Quill Author for iPad mini 3

The Author turns your tablet into a stylish book with completely customisable looks from the inside out. Made of hand-finished wood, the case features precise cutouts for your ports and buttons, includes a proprietary 'bookmark' for easy removal and is compatible with the iPad mini 3's magnetic sleep/wake feature. As an option, a pocket can be added to store documents while you're on the go.

Pad & Quill

US\$69.99 + shipping

www.padandquill.com



STM Harbour for iPhone 6

The Harbour sports a dual-layer construction designed to prevent damage from drops and scratches. Made of thermo polyurethane, the iPhone 6 and iPhone 6 Plus cases precisely fit your handset for minimal bulk, provides easy access to all ports and buttons, and come in green, charcoal, dark red or black. The bottom of the cases feature a hinge to ease docking.

STM / \$29.95 / www.stmbags.com.au



APP GUIDE

Cool software for the iPad, iPhone & iPod touch.



WORKFLOW

PRODUCTIVITY

DeskConnect

iPhone & iPad \$3.99

The first true automator for iOS, Workflow takes full advantage of Apple's looser restrictions on sharing to bring new levels of interactivity and multitasking to our handheld devices. More versatile than the situational IFTTT and more powerful than even Launch Center Pro's slick system of shortcuts, Workflow's endlessly customisable actions integrate seamlessly into the apps you already use to help you work smarter, faster and just plain better. Workflow works with a decent cross-section of third-party apps like Tweetbot, Things, Uber and Evernote, as well as tapping into iCloud Drive's file system for uploading, but I get the impression that it will be evolving rather quickly. But even if it never sees another update, Workflow doesn't disappoint.



**TOP
PICK**



BASECAMP

BUSINESS

Basecamp

iPhone & iPad FREE



This collaborative workspace app has been updated in both its free iPhone and iPad versions. In both cases, it's now easier to create and assign 'To-Dos' and both apps are more easily searched. The iPhone version lets you see the day's tasks directly from the widget screen. Best of all: if you finish using Basecamp on one device, you can pick it up from another device.



KITCHENBOWL

FOOD & DRINK

Apphat

iPhone FREE



Kitchenbowl is a free iPhone app that aims to be a social community for foodies, who can use the app to share and discover step-by-step photo recipes. Users can follow others, interact with each other by sharing comments and liking posts, bookmark recipes of interest and even create their own step-by-step recipes to share on their social networks.



MUSIC CENTER

MUSIC

Akhil Tolani

iPhone & iPad FREE



This free app does one thing: it creates a widget that lets you view and play your entire music library from the Notification Center's Today view on your iPhone's lock screen or from within another app. Users can scroll through their favourite tunes via a list or tile view and play, pause, shuffle, repeat and move back or forward through tracks via music controls.



MICROMON

GAMES

Pocket Trend

iPhone & iPad \$1.29



If you love *Pokémon*, you'll also love Pocket Trend's *Micromon* – because it's practically the same game. *Micromon* is an adventure game in which you use Micromons to battle other characters and players. You – a newly minted Micromon tamer – travel throughout the world of Pixekai catching Micromons, training them and battling leaders. Plus, for the game's entry price, you get hours of gameplay.

**WTHR COMPLETE**

WEATHER

r3app

iPHONE & iPAD \$2.49



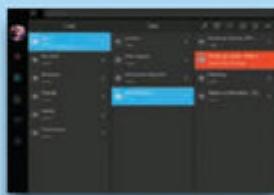
The beautifully designed Wthr Complete offers a variety of weather information in the one location including the current conditions, an eight-day forecast, air quality, UV, sunrise/sunset, moon phase, the day's average over the last four years and hourly temperatures for yesterday, today and tomorrow. The app has information from over one million locations and an on-screen clock shows the local time.

**CENTRALLO**

PRODUCTIVITY

Centrallo

iPHONE & iPAD FREE



Here's another get-things-done app for iOS that lets you make to-do lists and to-do lists within to-do lists, but Centrallo lets you add videos, photos, voice notes, links and more to items, letting you create a robust universe of information to guide you as you go about your daily routine. Users can even set due dates in your calendar.

**WIRE**

SOCIAL NETWORKING

Zeta Project Swiss

iPHONE & iPAD FREE



Wire is a bit like Skype for messaging and audio chats, only a bit more versatile. The iOS app lets you integrate pictures, links, SoundCloud music and YouTube videos into the conversation. It's available with a companion app for OS X, so you can converse however you're online.

**BEAN DREAMS**

GAMES

Kumobius

iPHONE & iPAD \$3.79



In *Bean Dreams* you play as a sombrero-wearing jumping bean in an adorable platformer world. Beyond that, there's not much to get – and that's part of the charm of this instant classic game. With 48 unlockable stages, a rare degree of flexibility in a player's approach to a level, clever level design and an exceptionally fun, bright aesthetic, *Bean Dreams* is a quality game.

**CROSSY ROAD**

GAMES

Hipster Whale

iPHONE & iPAD FREE

It's only been out a few months but *Crossy Road* is one of the top time-absorbing iOS games on the App Store. Built on the same premise as *Frogger*, *Crossy Road* is a straightforward game of timing and reflexes, but that doesn't stop it from being a difficult game to really excel in. Here, there's no goal at the end of the stage, along with no set pattern of roads and rivers. Everything is randomly generated, which means you'll face a new challenge every time. *Crossy Road* is charming, with vivid block-based artwork that surely owes some debt to *Minecraft*. Whether or not you have a soft spot for *Frogger*, by which it is inspired, *Crossy Road* is one of the top time sinks available on the App Store today.





The paranoid person's guide to a complete Mac backup

BY ROB GRIFFITHS

I'm somewhat paranoid about backing up my data files. And by 'somewhat paranoid', I mean 'petrified'. If you're not of a similar mindset, you should be. Consider what it would mean to lose some irreplaceable photos, for instance. Or the please-let-me-keep-my-job presentation that you've been putting together for months. Or your financial data. Being paranoid in every waking hour isn't a great way to get through life, but when it comes to backing up your data it's nearly impossible to go too far. Here's the multi-level plan I use to keep my paranoia at bay.

LEVEL 0: SYSTEM SETUP

My backup plan begins with my basic system setup, which may be different from yours. I keep very little data on the internal boot drive. My user's folder is on that drive, along with my most used applications. But that's it – everything else is saved elsewhere. I even go so far as to use aliases (or symbolic links, if necessary) to move large data files off the boot drive for programs that don't let me specify a storage location. As a result, my boot drive is typically fairly empty – I'm using just 75GB of the 256GB SSD in my Retina iMac, for example.

So where does everything else reside? On an external RAID setup, complete with a spare drive in a drawer (in the event of a drive failure). This strategy protects my files well enough while I'm working. But, as you'll often hear, RAID is not a backup solution. So how then do I back up my files?

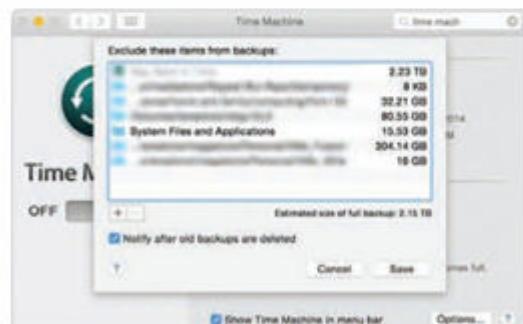
I use a multi-drive, multi-location backup strategy, with the goal of ensuring that I won't ever lose a critical file due to equipment failure or natural disaster. (It's still quite possible to lose data via user stupidity; even the best backup plan isn't completely foolproof in that regard. But I take steps to minimise that risk as well.)

LEVEL 1: TIME MACHINE

Time Machine is my first line of defence, and the only aspect of my strategy that includes support for older versions of files. It's the first place I go if I've accidentally deleted a file (user stupidity) or need an older version of something.

In order to keep the deepest version history possible, I skip a fair number of file types from my backups. You can have Time Machine skip certain files or folders by clicking the Options button in the Time Machine system preferences panel, then clicking the plus sign to adding those files you'd like Time Machine to skip.

Tip. If you add an OS X-owned folder – such as the top-level System folder



Leave them out. I exclude a lot of files and folders from Time Machine, including all system-related files and stock OS X applications.



The plan. My boot clone is created using Carbon Copy Cloner 4 – here you can see it's set to run when the clone disk is attached to my iMac.

– Time Machine will ask you if you'd like to skip all system files. I reply yes, because Level Two of my strategy takes care of my system files. When you say yes, Time Machine shows 'System Files and Applications' as being excluded from the backup.

In addition to the system files and applications, what other types of things do I skip? I don't back up any ripped DVD or Blu-ray movies, again because there's no need for versioning, and they're backed up at other levels of my strategy. I also exclude any Parallels or Fusion virtual machines as both apps include their own snapshot features for versioning, and I back up the full virtual machines elsewhere.

By not using Time Machine for these types of files, I've freed up hundreds of gigabytes of space that can be used for multiple versions of my data files. I do, however, have Time Machine back up my iPhoto and iTunes libraries, along with all my work and personal data files. These are files that I want to be able to get back quickly, or access older versions with a minimum of hassle.

LEVEL 2: BOOT CLONE

A boot clone is not a perfect copy of your favourite pair of boots. Rather it's a perfect copy of the hard drive that boots your Mac. Having a clone is critical – if your boot drive ever has a fatal error, you can connect the clone drive and reboot, and be back where you were with a minimum of disruption.

There are many ways to make a boot clone. I use Carbon Copy Cloner

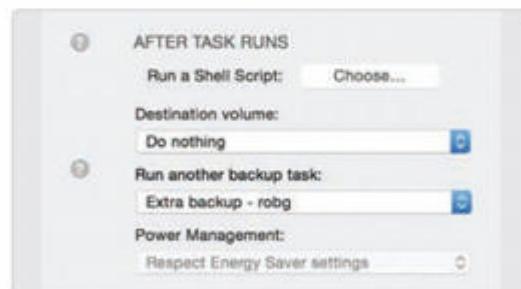
4 (CCC4). Creating a clone with CCC4 is a simple point-and-click operation.

As I don't like leaving a clone drive connected all the time, I have a bare drive that I insert into a Sabrent 3 drive dock on a regular schedule.

I update my clone about three times a week. Because the vast majority of my files live on the RAID, it's not critical that the clone is current to the minute. Using CCC4, I created a clone task that's set to run on disk mount. Updating the clone is as easy as dropping the bare drive into the drive dock; CCC4 sees the drive mount and starts updating the clone. Typically the whole task takes about five minutes, as only changed files are updated. (The initial clone takes much longer, of course.)

When the clone is complete, I remove the drive from the drive dock and put it back in its storage box for a couple of days. If my boot drive ever fails, I know I can get back up and running in a hurry, and probably not be missing anything other than some modified preference files.

LEVEL 3: PARANOID BACKUP
I call this level my paranoid backup, because I always think something can go wrong with my backups. My paranoid backup is another full backup of my files, to supplement both Level 1 and Level 4 backups. I use the Sabrent drive dock and CCC4 for this backup as well; when I insert



Organised. This section of Carbon Copy Cloner 4 allows one backup task to run when the current task finishes. This makes it simple to chain together tasks that back up files on different disks, for instance.

the Paranoid disk, CCC4 fires off the backup task.

One very useful feature in CCC4 for the paranoid backup is the ability to 'chain' backup tasks. Because this is a full backup with files from both the RAID and internal hard drive, I have four separate backup tasks in CCC4. The first task is set to run on disk mount. The following tasks are set to run when the prior task completes.

So my paranoid backup is just as simple to run as my boot clone: I insert the Paranoid disk, and the magic just happens. When it's done, I remove the drive and return it to its storage location. I usually do this once a day, though sometimes twice if I'm creating a lot of new files.

I'm so paranoid that I even back up my cloud services' files here, even though they reside on every Mac and in the cloud. So yes, I'm paranoid about backups!

LEVEL 4: OFF-SITE BACKUP

The best backup strategy in the world is no good if all of the backups are stored with the computer. You need to keep a set of files in a separate location in case your primary location is visited by fire, flood, theft or other disaster. In my case, that means sending a backup disk to my wife's office.

Our off-site backup is also done on a bare disk, inserted into the Sabrent drive dock. As with the Paranoid backup, it runs via CCC4 on drive mount, and chains together a number of separate tasks to perform a full backup.

My wife brings the drive home once a week, I update the backup that evening, and it goes back in the morning. So yes, we have one night's exposure to a disaster while the disk is home. But I keep the disk elsewhere that night, so at least it's nowhere near the computer.

To remind my wife to bring the drive home, I rely on the simple AppleScript application pictured on the next page.

```

set theAccount to "outgoingEmail.address"
set the_molito to "recipient@email.address"

tell application "Mail"
    activate
    set this_message to make new outgoing message with properties {sender:theAccount, visible:true, subject:"Please bring the drive home", content:{"As the subject says - thanks!"}}
    tell this_message
        make new to recipient at end of to recipients with properties {address:the_molito}
    end tell
    send this_message
end tell

```

Obviously, you'll need to change the script's email addresses to contain valid To and From addresses, and you can change the subject and the text of the email to suit your needs.

I run this script once a week, using a launch agent. (Yes, she could put a repeating reminder on her calendar, but I like to make sure she gets a reminder from me, too.)

LEVEL 5: DOUBLE-PARANOID BACKUP

This is an automated backup to our Time Capsule of critical work and personal files that runs four times a day via a scheduled task in CCC4. It's fully automatic; I see the OS X notification when the backup finishes, but that's the extent of my involvement in it.

In addition to copying to the Time Capsule, I also copy from the Time Capsule. I use a set of scripts to back up our websites to the Time Capsule. These backup files are then copied to a backup folder on my RAID three times a day, so that they are also backed up. (These backups of backups eventually wind up on some of the other backups as well.)

I cannot fathom having to use this extra-extra redundant backup, but it makes me comfortable knowing it exists.

LEVEL 6: CLOUD BACKUP

If you've read this far, you've probably wondering why I don't just back up everything to a cloud drive somewhere and be done with it. There are a few reasons why I don't use it as my primary backup target.

I have a lot of data – at nearly 3TB, getting the initial backup done would take forever. I also don't like the thought of using my upstream bandwidth to update a backup on a regular basis. There's also a trust

issue: this data is mine, and I don't want to rely on a third party to stay in business in order to get my data if I need it back. Finally, if I do have a major crisis, waiting hours (days?) to download 3TB of data to get back up and running is not my idea of a good way to spend my time.

Despite my general disinterest in a full cloud-based backup, I do back up some key files to the cloud. That way they'll be in yet one more place in the event of a major problem.

Although the cloud services encrypt your data, I'm still a bit uncomfortable trusting that there won't be an exposure somewhere along the line. So before I back up any files to the cloud, I first copy them to an encrypted disk image and then copy that image to the cloud (using a CCC4 task). That way, if someone does get a decrypted copy of what was on the cloud, my data will still be protected, as it was encrypted locally first.

Perhaps in the future when cloud drives are all 4TB+ in size, and our upstream connection speed is measured in gigabits per second, I'll be more comfortable with a primarily-cloud-based backup solution. Until then, I view the cloud as an additional element in my backup strategy, not a primary destination.



Off-site backup. A cloud-based service such as CrashPlan is another backup option.

OTHER MACS

Although we have more than one Mac in the house, all of the key files reside on my primary iMac. The other machines have their data files backed up to our Time Capsule via Time Machine. Critical files are then copied out to a cloud drive on a regular basis (and encrypted first). However, I don't bother with a boot clone for the other Macs. If one of them were to have a disk failure, it'd be an inconvenience, but no single disk is so critical to us that it needs to be up and running immediately.

THE FINAL WORD

I'm probably an outlier in terms of backup strategy; I don't expect nor preach all to follow what I do. But you should have some kind of backup plan for your data, and that plan should involve redundant backups, with at least one of them being stored off-site.

You can accomplish this with Time Machine and an off-site backup, or Time Machine and a cloud service backup, or some other combination of here and there schemes. The important thing is to have copies of your data files in multiple places.

In addition, your backup plan must be as simple as possible to implement. If it's complicated, you won't keep up, and an old backup isn't much better than no backup. After years of trying various solutions, I'm incredibly happy with the amount of automation in my current plan. All I have to do is drop disks into a drive dock and CCC4 and some scripts do the work.

With any luck, you'll never put your multi-site, multi-copy backup system to use. But if you do, you'll be very glad you went through the trouble of creating a comprehensive backup plan! ☺



How to simplify overlapping cloud storage services

BY JOE KISSELL

There's no shortage of choices for cloud storage, but that leads to another problem: how do you decide which services you truly need, and which files to put where? If you've signed up for as many cloud providers as you have files, it's time for an intervention (or at least a moment of clear-headed contemplation).

I'll admit it: I'm an online storage junkie. At one time or another I've synced files to the cloud using Amazon Cloud Drive, Amazon S3, Bitcasa, Box, DollyDrive, Dropbox, Google Drive, iCloud Drive, Microsoft OneDrive, SpiderOak, SugarSync, Wuala and probably a few others I'm forgetting – not to mention using online backups from Backblaze, CrashPlan and Mozy, and storing photos with services such as Flickr and SmugMug. Some of these services are free (at least for a limited amount of data) while others are inexpensive, but inexpensive times a dozen or more starts to hurt. Meanwhile, I had the same folders syncing to three or four services simultaneously, which slowed down my Mac, wasted bandwidth and tested the limits of my ISP's monthly data transfer allowance.

The challenge was what to do about it. "Just pick one!" you may say. Fine, but if I pick Dropbox, then Google Docs can't see my online files. If I pick Google Drive instead, then my iOS apps that support only iCloud won't have access. And so on. Companies like Apple, Google and Microsoft benefit when you stay within their respective ecosystems, so they tend to make it easier to use their own cloud storage services than those of their competitors. (Microsoft's recent decision to integrate Dropbox support in its Office apps for iOS – supplementing OneDrive – is a welcome exception.)

Even if interoperability weren't a problem, it's not as though these

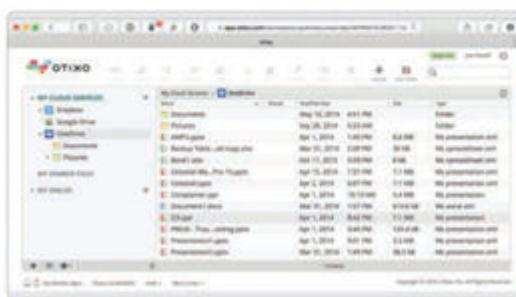
various cloud storage services are otherwise interchangeable. Each one is different when it comes to such matters as privacy and security, saving older versions of files you've since modified or deleted, APIs for integration with third-party products, storage limits and pricing.

Each person's needs and preferences will vary, but I'd like to offer some tips based on my own experiences in simplifying cloud storage.

LOOK FOR BROAD COMPATIBILITY

Whatever else you may say about Dropbox, far more apps support it than any other cloud service, particularly on iOS. (It's also quite inexpensive, which doesn't hurt.) Perhaps the scale will tilt toward iCloud Drive at some point, but even if that happens for iOS, Dropbox works on more platforms, including Android and Linux.

So I use Dropbox as my all-purpose cloud storage provider, and probably will for the foreseeable future. If you prefer to use, say, SugarSync for general purpose cloud storage and all the apps you care about happen to support SugarSync natively, that's terrific – but the odds are against it.



Aggregator. Otixo lets you see and search the files stored in many cloud services in one place and move files between providers easily.

ELIMINATE REDUNDANCY

Offers of free (or cheap) storage are tempting, but don't add an account just because you can. Each cloud storage account you use should serve a unique and useful purpose. I cancelled my accounts with several providers because they all duplicated capabilities I already got elsewhere. On the other hand, I keep Google Drive and iCloud Drive, despite their similarities, because each one offers features the other doesn't: namely, integration with the provider's proprietary software.

DON'T CONFUSE CLOUD STORAGE AND CLOUD BACKUPS

Cloud backup services such as CrashPlan copy files to distant servers, and let you retrieve those files from another computer or an iOS app. That sounds a lot like cloud storage. On the other hand, Dropbox stores deleted files and old versions for 30 days, or up to a year if you pay extra for Extended Version History (www.dropbox.com/help/113). That sounds a lot like cloud backup.

But services that specialise in storage are generally better at keeping your files in sync across devices, while

services that specialise in backup are generally better at long-term retention and data restoration (and often have superior encryption, too). Each service meets a different need, so I don't consider cloud storage and cloud backup of a given folder to be redundant. I use both.

LET EACH SERVICE STAND ALONE

Suppose you use iCloud Drive because that's what Keynote works best with, and Google Drive because that's what Google Docs works best with. Fair enough – let each service hold its own documents. If the two sets of files sync independently with your Mac (and in most cases they will), that's even better. But trying to sync all your documents between cloud services is usually a waste of effort (and perhaps, depending on how you do it, a waste of money). That brings me to the next point.

USE AGGREGATORS ONLY AS NEEDED

Providers such as cloudHQ (cloudhq.net), Otixo (otixo.com) and ZeroPC (zeropc.com) let you aggregate cloud storage services – that is, after you connect all

Each person's needs and preferences will vary, but I'd like to offer some tips based on my own experiences in simplifying cloud storage.

your accounts, you can see your documents from every provider in a single view in the web or an iOS app, drag files from one service to another to copy or move them, and in some cases even sync files between cloud services.

GO OFF-CLOUD FOR PRIVACY

A handful of cloud storage providers, including SpiderOak and Wuala, offer 'zero-knowledge' encryption, which means your data is encrypted in such a way that the provider can't decrypt it without your personal key, even if the government were to demand it. That's great – I'm a huge fan of encryption – but because my favourite iOS apps don't support these services, that severely limits their utility for me.

So, when privacy is important, I either encrypt a file myself before uploading it to Dropbox, or use a 'personal cloud' product such as BitTorrent Sync (getsync.com), ownCloud (owncloud.org) or Transporter (filetransporter.com), each of which has unique virtues.

As long as my favourite apps insist on keeping me locked into specific cloud storage services, I won't be able to pick a single provider and stick with it. But I've already reduced my tally significantly and, if more developers make customer-friendly moves like the Microsoft-Dropbox partnership, choosing cloud storage services may be less of a hassle in the future. ☺

Places

- OneDrive - Personal
- Dropbox - Personal
- iPhone
- + Add a Place

Account New Recent Open

What is this madness? Microsoft letting me access Dropbox in Word for iOS? Wow. Now if only Google Docs would give me access to iCloud Drive.

Family Sharing on an iPad, iPhone or Mac

BY LOU HATTERLEY



Family Sharing is a new feature introduced alongside iOS 8 and OS X Yosemite. With Family Sharing, you can share apps, music, movies, books and more with all members of your family.

Once you've set up Family Sharing, you no longer have to buy items individually. When one person in the family buys an app, book or content from the iTunes Store, it is immediately available to all other members of the family to download for free. (Usually... App developers/content makers need to activate Family Sharing for their digital media. If they don't, you won't be able to share it.)

Up to six people can use Family Sharing, and you all pay on the same credit card, so Family Sharing is ideal for families that want to combine their purchases. It is also possible to set limits for younger family members, so when a child asks to buy an app (or other item from the iTunes or App Store) an alert appears on an adult's phone. If you have this option activated, the youngster won't be able to make the purchase until and unless the family administrator agrees to it.

There are other benefits to turning on Family Sharing too. It integrates with other Apple services, such as iCloud and Find My Friends. With Family Sharing set up you get a group calendar and reminders lists for your family, so you can organise events together. And Find My Friends can be used to share the location of your family members, making it easier than ever to meet up. You can also all contribute to a shared family photo album, with all the photos appearing up-to-date on everybody's device.

HOW TO SET UP FAMILY SHARING ON AN iPad OR iPhone

The easiest way to set up Family Sharing is probably on an iPad or iPhone.

Open the Settings app and scroll down to the iCloud section. Check that the correct Apple ID is displayed at the top – the Apple ID from which

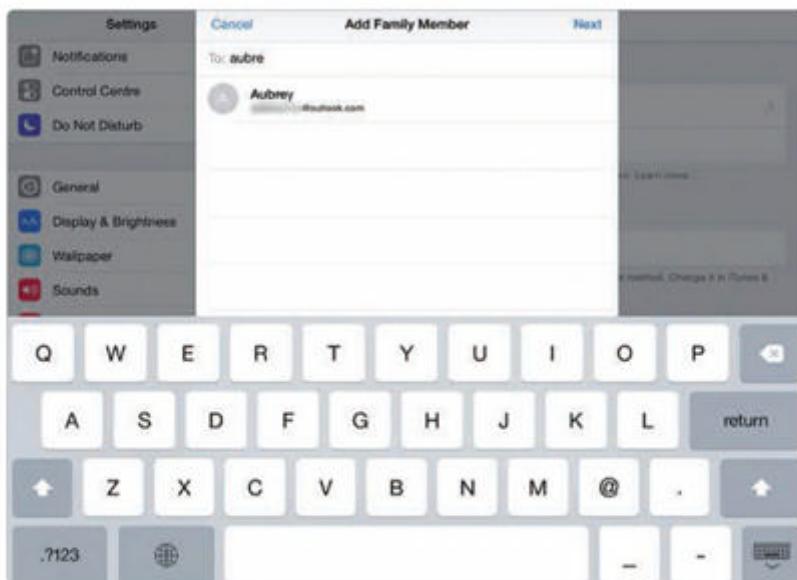
you wish to administrate Family Sharing – and then tap on 'Set Up Family Sharing...'

You'll now see a series of windows that you breeze through pretty quickly, but, if you're interested, they briefly describe the features you'll be able to use with Family Sharing, and contain a few warnings about what exactly you're letting yourself in for – the things you'll be paying for, primarily. Tap Get Started on the first screen, and then Continue on the second and third ones.

The fourth screen, with the title 'Payment method', is very important. This shows the final four digits of the credit/debit card associated with the Apple ID you're using. This is the card that will be debited whenever someone who's part of the family group buys an app, a song, a film or whatever from Apple. Make sure it's the right one before tapping Continue a third time.



Keep track. Switch on location sharing if you need to know where your family's devices are.



Get connected. Add new family members via email.

As well as sharing apps and other digital content, Family Sharing allows you to share location data with your family. On the next screen you decide whether your own location data will be shared with other family members; when they each accept your invitation to join the family, they will in turn choose whether to share their location data. (At this point you may wish to give firm instructions as to which option they choose!)

Select 'Share Your Location' or 'Not Now'.

And that's it: your family unit is set up. But for the time being it's a family of one. Now you need to add further family members.

From the main iCloud screen in Settings, tap Family, then Add Family Member. You can then add type in the email address of your family member (or, if they are in your contacts list, just start typing their name and then select the right person when they appear).

The 'Ask to Buy' screen allows you to stipulate whether the family member will need to get permission from you whenever they buy an app or piece of digital content. In most cases you will wish to select 'Ask Permission for Purchases', although you may let your spouse have free rein with the credit card... Tap Next.

Now decide how you wish to bring

the family member into the fold – either sending an invitation or creating a password that they can enter right away. (Our experience suggests that the invitation only takes about 20 seconds to arrive, so is a convenient option too, but if you're away from internet access it may not be suitable.)

And that's pretty much it. The family member gets their invitation (or enters their password), accepts (or declines), then simply selects whether to share location data. And you're ready to go with Family Sharing.

HOW TO SET UP FAMILY SHARING IN MAC OS X

You can also set up Family Sharing via a Mac – again, it's pretty simple, but the only complication is that the Mac needs to be running Yosemite. Here is how to set up Family Sharing for all the members of your family on a Mac.

- Open *System Preferences* > *iCloud*. (Tap Sign In and enter your Apple ID and Password).
- Click on Set Up Family.
- Click on Continue and Continue again.
- A window will show the account that you will use to share purchases from. Double-check that it is your main Apple ID account and click Continue.
- The Purchases Initiated By Your

Family window will show which card is being used for payments. Click Continue.

- Click the tick box next to I Agree To The iTunes Store terms and conditions window and click Agree.
- If you want to use Find My Friends to locate your family, tick the Share Your Location option and Continue (otherwise click Not Now and Continue).

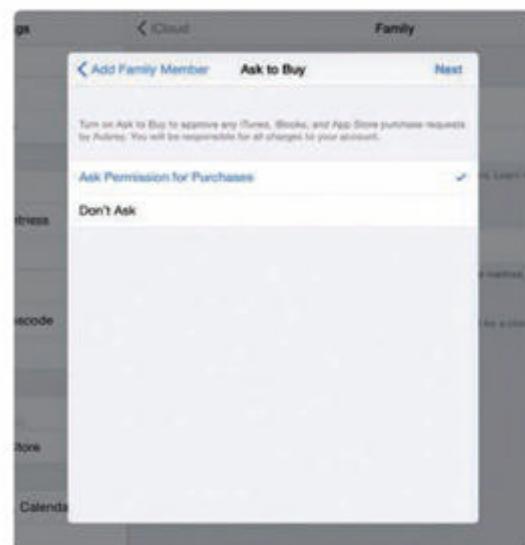
Family Sharing is now set up on your Mac. The next step is to add members to it.

HOW TO ADD FAMILY MEMBERS TO FAMILY SHARING ON A MAC

Now that you have set up Family Sharing in OS X, it's time to add a family member. Here is how to add people to your family:

Open *System Preferences* > *iCloud* and click on Manage Family.

- Click Add Family Member.
- Enter the email address for the family member and click Continue.
- Confirm you are the Family Organiser by entering the three-digit CVV security code from the payment card associated with your



Permission. The 'Ask to Buy' screen allows you to stipulate whether the family member will need to get permission whenever they wish to make a purchase.

account. Click Continue.

- Enter your Apple ID password and click Continue.
- The person to whom you sent an email will receive an email invitation in Mail and Alert in iCloud on their iOS devices. Here is how they accept the invitation.
- Open Settings on an iOS device.
- Tap *iCloud > Invitations*.
- Tap on the Accept button.
- Tap Confirm and Continue.
- Tap Agree on the terms and conditions and Agree in the Alert window.
- Tap Share your Location to use Find My Friends (or Not Right Now).

You are now part of a shared family, and any purchases you make are charged to the family organiser, and can be shared with both members of the family.

WHO PAYS FOR CONTENT IN FAMILY SHARING?

It's important to note that the person who sets up Family Sharing is the organiser. This is the person in charge, and they pay for all purchases. So if you set up Family Sharing for your partner and family members, your card is charged for all purchases.

There is also no way for other family members to pay for Family Sharing content. Only the person who originally set up Family Sharing can pay. Other family members can leave Family Sharing if they want to pay for an app, or music, but they can only do so twice a year. So make sure you are happy to be paying for all content in Family Sharing when you set it up. ☺



Sync. Family Sharing makes it easy to share photos and calendars.



How to pick the best photo editor for your life

BY LESA SNIDER

Browsing the App Store for new photo-editing software can be overwhelming. There are dozens of image editors and it's difficult to tell which is the right one for your needs.

If you're already using iPhoto or Aperture, stick with those programs until Photos is released – it may be all you need. If, however, you're willing to pay for more features, here are all the big (and subtle) differences between today's top image editors to help you choose the software that's best for you.

iPHOTO

This image database and non-destructive editor will be replaced by a new app named Photos in 2015,

though it's still one of the easiest places to import, manage, correct and share your photos. Instead of editing your originals, it stores your edit requests in a database, so you can always revert to your original.

It works on a variety of file formats, including raw, and its Adjust panel lets you adjust exposure, colour temperature, highlights and shadows (independently), remove noise and sharpen. A rudimentary healing brush lets you remove small stuff, and you can easily create black-and-whites, add a sepia (brown) or vintage tint, and apply a white, black or blurry effect to a photo's edges.

iPhoto lets you share images via email and social media sites, and

create gorgeous cards, calendars and photo books – you can print the cards yourself, too, which is handy.

On the downside, there's no way to edit a certain area in your image (you can't lighten teeth, for example), adjustments can be copied and pasted only onto one other image at a time, and you can't combine images or add text. iPhoto also squirrels your photos away into its own filing system, so you can't control the directory structure in which photos are stored.

ADOBE PHOTOSHOP LIGHTROOM

Like iPhoto, Lightroom's database lets you import, organise and edit photos non-destructively, though it uses your

file organisation structure. Designed for photographers, it sports easy-to-use controls for cropping, correcting exposure, adjusting highlights and shadows, boosting colour, adding edge vignettes, reducing noise, correcting geometric and perspective problems, performing precise sharpening and more. You can copy and paste or sync changes across multiple images, and it has a never-ending history panel, so you can always see and undo what you've done.

Lightroom doesn't support layer-based editing (think stackable transparencies), but it has several tools that can be used to affect specific areas of your image. You can remove small objects, duplicate pixels, create black-and-whites, create partial colour effects, create colour tints (split-tones), apply digital make-up, lighten teeth and apply changes in a linear or radial fashion, or paint them on by hand.

It also lets you create pro-level photo books, printing templates, slideshows and simple web galleries, plus you can create presets for nearly everything you do in the program (handy for exporting images at certain sizes with watermarks and for uploading to social media sites such as Facebook).

Apple's Aperture is nearly identical and, though it'll also be replaced by Photos, don't switch to another program yet – you'll lose the ability to undo your Aperture edits. Instead, hang tight until Photos is released.



List of changes. Lightroom's powerful Develop module, with a handy list of all your edits in the History panel.

MYLIO

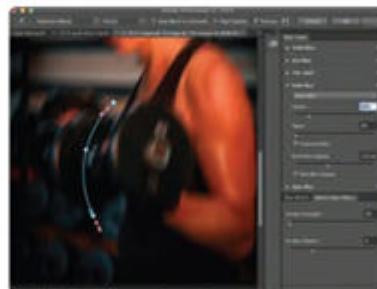
Launched in late October 2014, this database-driven, non-destructive editor is generating a lot of buzz. Mylio is designed for everyone who takes pictures (hobbyists and pros) and manages all your photos – iPhone, Facebook, point-and-shoot, DSLR, etc. – in your own directory structure, so you can view them side-by-side and easily search your whole library.

Mylio syncs your photos among the desktop and mobile devices you tell it about, so your entire collection is constantly backed up and accessible. You can edit, share and export photos using Mylio, too. Its editing features are much like Lightroom, though without the ability to adjust parts of the photo or create projects.

ADOBE PHOTOSHOP CC

This pro-level pixel pusher is as powerful (and complex) as it gets. Aimed at graphic designers, web designers and pro photographers, nothing screams digital status like Photoshop mastery. It supports many colour modes, including CMYK (crucial for printing newspapers and magazines) and ProPhoto RGB (great for pro photographers), it gives you access to the individual colour channels that comprise your image – red, green, blue and so on – and you can create channels for fancy print effects (spot colours, varnish, metallic coatings etc).

Photoshop is the original layer-based editor and its layer masks



In motion. Among Photoshop's many superpowers is the ability to apply precise motion using its Path Blur filter.

let you hide the content of a layer in specific areas (handy for adjusting parts of your image).

It supports eight-bit or 16-bit editing (the latter supports more colours) and lets you alter exposure and colour using a wide variety of methods – it comes with the full Adobe Camera Raw plug-in that sports nearly the exact same panels, sliders and tools found in Lightroom. You can create simple and extremely complex selections around hair and fur that you can save, and it includes many intelligent tools that let you realistically remove and reposition objects.

You can also create vector-based art with it – art that's based on points and paths instead of pixels – either by converting text, by drawing with its mighty Pen tool or by using built-in shapes. You can edit the points and paths of vector art, and use its powerful brush engine to create paintings from scratch. Photoshop also lets you create 3D objects, record actions (keystrokes), edit video (it supports multiple video and audio tracks), create animated GIFs and animate layer content using key-frames.

Photoshop is no database though, so you can't use it to import or manage photos; however, you can do that using Adobe Bridge (separate download; free with Photoshop subscription). Adobe Bridge isn't a database either, so it doesn't store your edit requests in a catalogue like iPhoto, Lightroom and Mylio; instead, it's an image browser and batch-processing tool.

ADOBE PHOTOSHOP ELEMENTS

Powerful yet user-friendly, this consumer-level editor is a scaled down version of Photoshop. Its three editing modes – Quick, Guided and Expert – can accommodate any skill level (Guided mode includes step-by-step instructions for many practical tasks). Elements also lets



Missing piece. The puzzle effect applied in Elements' Guided mode, which has been manipulated further in Expert mode.

you create prints, books, cards and calendars (though the templates are lame), Facebook cover images etc. and easily share images via email and social media sites. Its database component, the Elements Organizer, lets you import and organise images, as well as edit photos non-destructively – it doesn't store edit requests, it merely lets you save multiple versions of the same image and tracks the copies. Elements supports layers and layer masks, and includes tools that you can use to remove and reposition objects, though it miraculously includes Photoshop's powerful Refine Edge dialogue box for selecting hair and fur. (It also includes a scaled-down version of the Adobe Camera Raw plug-in.)

On the downside, Elements only supports RGB colour mode; it doesn't let you access individual colour channels, or edit 16-bit files. You can



Powerful. The incredibly powerful Pixelmator has a slew of slick effects, like the Circle Splash shown here.

create text, though formatting options are extremely limited, and while you can create vector-based art using its shape tools, you can't edit points and paths, nor is there a Pen tool with which you can draw freehand.

Elements includes many Photoshop filters, including the powerful Liquify for extreme pixel pushing and subject reshaping, but lacks the Blur Gallery and the ability to use Smart Filters.

PIXELMATOR

Pixelmator is a nice alternative to both Photoshop and Elements, as it has similar functionality, but no database component. It doesn't support CMYK mode (save through soft-proofing) though it does work in ProPhoto RGB and sRGB, and it supports eight- and

16-bit editing, layers and layer masks. You can push a photo through text and create selections (though it doesn't have anything like the Refine Edge dialogue box to help you select hair or fur). You can correct exposure and colour (it has both Levels and Curves adjustments), draw vector-based art freehand (you can edit the individual points and paths, too), create text (with limited formatting) and perform some pixel-pushing through Warp, Bump and Pinch tools. You can also remove and duplicate objects, apply a slew of preset effects (think filters), create paintings and easily share images via email or social media sites.

FINAL THOUGHTS

As you can see, there are many image editors to choose from depending on your needs. If you're into scrapbooking, try Photoshop Elements or Pixelmator. Engineers, high-end retouchers, restoration artists, web professionals, fine artists and die-hard graphics gurus need Photoshop CC. Everyone else may be best served by embracing Lightroom (or Apple's forthcoming Photos app) as their organisational, image improvement and project creation tool.

Lastly, everyone should keep an eye on Mylio, as it just may be the photo management tool of our dreams. Until next time, may the creative force be with you all. ☺



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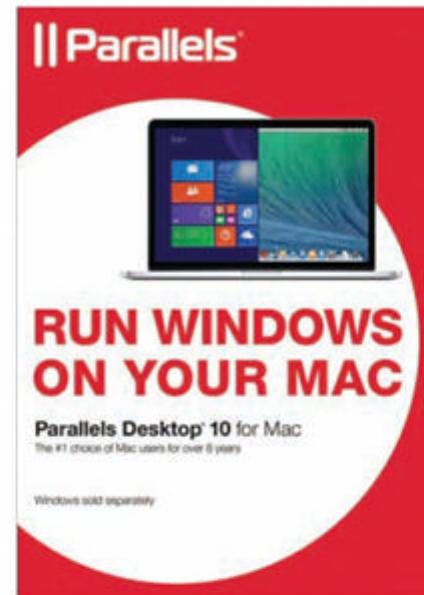
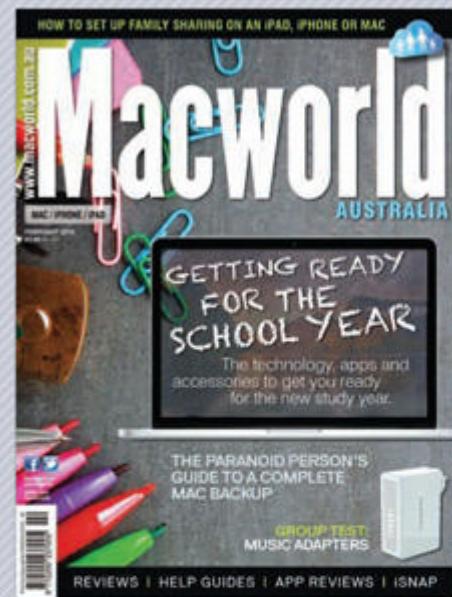
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The many superpowers of Apple's Preview app

BY LESA SNIDER

Apple's Preview app, preinstalled on every Mac for years, is one of the most underused programs ever. Far from being an image preview app, as its name implies, you can use it to convert file formats, grab a frame from a movie, learn the size of a web-based image, sort a folder of images, remove backgrounds and more.

CONVERT FILE FORMATS

To get a handle on Preview's abilities, consider the file formats it can open and manipulate. How is this exciting? Let us count the ways. You can convert a PDF file to a pixel-based format for printing (say, if you've got a PDF that refuses to print) or for posting on the web (say, a JPEG, GIF or PNG). You can convert image files to PDF (say, for emailing a receipt to someone) or, perhaps most amazingly, convert Adobe Illustrator or legacy EPS files to PDF format

— without the need for Illustrator.

To do it, open the file in Preview, choose *File > Export* and then select a new file format. If the original is a vector-based logo or illustration, the resulting PDF will also be vector-based (meaning you can enlarge it without losing quality). Remarkably, Preview's support of native Photoshop (PSD) and Illustrator (AI) files means that you can send either of these native file formats to anyone using a Mac and they can use Preview to open and print them.

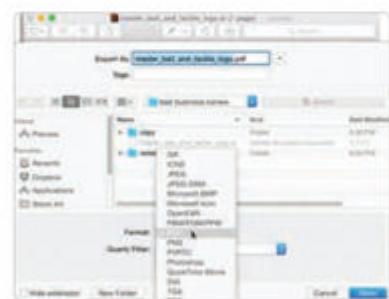
GRAB A FRAME FROM A MOVIE

If QuickTime Player can play the movie, you can capture a frame from it. Here's how: just pause the movie at the point you want to capture the frame by pressing the spacebar and then press $\text{⌘}-\text{C}$ to copy it to your clipboard. In Preview, choose *File > New from Clipboard*, and it creates

a new file containing the frame from your movie. You can then save the file in whatever format you need.

REMOVE A BACKGROUND

To quickly remove the background behind an object or logo (say, to place the object over a new background), activate Preview's Instant Alpha tool



More options. Preview's Export dialogue box hides all but the most common file formats. To see the full list, hold down the Option key when clicking the Format menu in the Export dialogue box.

by clicking its icon in the toolbar (it looks like a magic wand). Next, click and drag atop the background; if you don't see the Instant Alpha tool, click the Markup Toolbar icon to display all the mark-up tools (it looks like a toolbox). As you click and drag atop the background, your selection appears as a pink overlay that indicates the areas that will be removed.

COPY A PORTION OF AN IMAGE

To copy a portion of an image, open it in Preview and simply click and drag to draw a selection rectangle atop the image. Next, press ⌘-C to copy it to your clipboard, then press ⌘-N to create a new document containing the contents of the clipboard. To make a selection from its centre outward (instead of corner to corner), hold down the Option key before or during the drag. Add the Shift key to constrain the selection to a square.

QUICKLY SEE THE SIZE OF A WEBSITE IMAGE

Here's a quick way to save an image from a website, and determine its exact dimensions: just drag it directly from the webpage onto the Preview icon in your Mac's Dock. Next, choose *Tools > Show Inspector* (or press ⌘-I) to summon a panel that shows its size, file format etc.

QUICKLY SORT A FOLDER OF IMAGES

Preview's sidebar is a great tool for sorting images before you commit to importing them into your image-editing app (say, iPhoto). For example, if your friend hands you a memory stick of 100 images, make three folders on your desktop named 'originals', 'keep' and 'toss'. Drag the files from the memory stick into the originals folder and open them in Preview. Next, drag thumbnails from Preview's sidebar into the appropriate folder ('keep' or 'toss'). The original

files will be left intact, but copies will appear in your sorting folders. When you're done, delete the originals folder.

If your images don't appear in the sidebar in the order you prefer, you can either drag them up and down to reorder them, or Control-click the white space in the drawer and use the resulting menu to sort by name, path, date, size or kind. You can also drag a thumbnail to the Trash icon to delete the original file, or drag it onto the Photoshop icon in your Dock to open it in that program.

ADJUST COLOUR AND EXPOSURE

In Yosemite, Preview sports an Adjust Color panel, which is similar to the controls in iPhoto's Adjustments panel in Edit mode. To use it, open a photo and then click the Markup Toolbar icon to display all the markup tools (it looks like a toolbox). In the toolbar that appears, click the Adjust Color icon (it looks like a pyramid or prism).

The Auto Levels button improves most images by adjusting brightness levels; however, there are also individual sliders to adjust Exposure, Contrast, Highlights, Shadows, Saturation, Temperature, Tint, Sharpness or add a Sepia colour.



Alter it. To quickly adjust an image, try using Preview's new Adjust Color panel.

ADD ANNOTATIONS

Peek inside the *Tools > Annotate* menu and you'll spot several ways to draw attention to areas in a document or image. As with previous versions, you can draw rectangles, ovals, lines, arrows, speech bubbles and add text. You can additionally highlight, underline or strike through existing text.

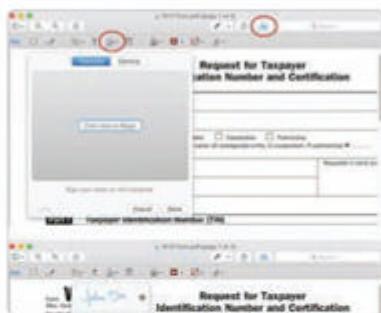
Preview 8 introduces five new annotation tools: Star, Polygon, Sketch, Mask and Loupe. Both the Star and Polygon tools are self-explanatory. Once you click on your document to add the shape, just drag the tiny, round green handle that appears in a circular motion to specify the shape's number of sides (the Star tool sports a second green handle used to control side length). The Sketch tool lets you add freehand squiggles. If they resemble a shape, Preview auto-converts them (oval-shaped squiggles become ovals, for example). If you'd prefer to leave your original squiggle as is, you can revert to it using the floating toolbar that appears.

Most exciting in the new annotation tool line-up are the Mask and Loupe tools. Each is accessible in the *Tools > Annotate* menu and in the Markup toolbar's Shape menu. The Mask tool lets you highlight an area(s) by adding a mask that darkens everything outside of it, which also makes for a slick photo effect.

The Loupe tool lets you magnify a certain spot with a resizable, stackable loupe. Once you add a loupe, you can increase or decrease its magnification level by dragging the round green handle that appears along its perimeter. You can also stack multiple loupe effects to magnify an area that's already magnified.

SIGN DOCUMENTS

Adding your signature to documents is far easier, too. Open the Markup toolbar by clicking the toolbox icon at the upper right, and then click the Signature tool (it looks like a tiny



Sign for it. You can capture a signature with your trackpad or iSight camera (top). Once your signature is captured, it appears as a menu item of the Sign tool for easy access (bottom).

signature). Either draw your signature using your trackpad or mouse or use your Mac's iSight camera to photograph a signature you've scribed onto white paper. Either way, Preview captures your signature with transparency, so you can gracefully plop it atop any document or image (say, for a quick watermark).

REDUCE PDF FILE SIZE

To slim the file size of any PDF (by reducing image quality), choose *File > Export*. In the resulting dialogue box, choose PDF from the Format menu and then choose Reduce File Size from the Quartz Filter menu. Click Save and call it done.

MERGE MULTIPLE FILES INTO ONE PDF

Preview can easily merge multiple files into a single PDF (say, to combine scanned documents or to combine a PDF with an image). To do it, open the first PDF or image, choose *View > Thumbnails* and then drag other files – single or multiple pages of any dimensions – from the desktop onto the thumbnail sidebar. Drag thumbnails to reorder pages within your newly combined PDF and then save the file.

ROTATE PAGES IN A PDF

To rotate a single page within a multi-page PDF (handy for scanned

receipts), choose *View > Thumbnails* and then select the thumbnails of the pages you want to rotate. Next, click the Rotate button in the toolbar or choose *Tools > Rotate Left* or *Tools > Rotate Right*.

CROP A PDF

If a page in your PDF has extra stuff around it – say, registration or crop marks – you can use the Rectangular Selection tool to crop it. Open the Markup toolbar, click the Rectangular Selection tool, and draw a selection around the area you want to keep. Next, choose *Tools > Crop* (or press ⌘-K to commit the crop). To crop multiple pages, choose *View > Thumbnails* and ⌘- or Shift-click to select multiple thumbnails before committing the crop. To crop all pages, press ⌘-A to select them before committing the crop. To draw a more accurate selection for cropping, choose *Tools > Show Inspector* to open the Inspector window, click the Crop icon (it looks like an angled comb), and enter the location and size of the desired crop.

PASSWORD-PROTECT A PDF OR IMAGE

To prevent a PDF or image from being opened, copied from or printed, try password-protecting it. Open the file and choose *File > Export*, and in the resulting dialogue box choose PDF from the Format menu. Next, enable the Encrypt checkbox, enter a password into the resulting field and click Save. Be sure to rename or change the location of your newly protected PDF to keep from overwriting your original!

EXTRACT AN APPLICATION ICON

Preview can extract several sizes of an application's icon as images. First, select the application wherever it lives in the Finder (say, in your Applications or Downloads folder) and then press ⌘-C to copy it to your clipboard. Next,

press ⌘-N to create a new document in Preview and all the sizes of the application's icon instantly appear as individual pages with transparency. To save a specific size as a new file, select the appropriate thumbnail and choose *File > Export*. To preserve the icon's transparent background, choose PNG or TIFF for the file format in the resulting dialogue box.

SOFT PROOF YOUR PRINT

Preview can also show you how a document will print on a certain printer, which is useful for seeing how a colour document will print on a black-and-white printer or how a vibrant image will look on a commercial press. Open the file and choose *View > Soft Proof with Profile* and in the dialogue box that appears choose a standard profile such as Generic Gray, Generic CMYK or a profile specific to your printer.

As you can see, Preview is mighty powerful, though perhaps the most difficult thing is remembering to use it! Until next time, may the creative force be with you all. ☺



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STM READER TIP

Switch Do Not Disturb on

Looking for a quick way to turn Do Not Disturb on or off on your Mac? It's very simple: just head to the Notification icon in the top-right hand side of your menu bar, hold the Option key and click on the icon. It will change to a grey-out version and Do Not Disturb will be activated.

Ian

EACH MONTH, STM gives a prize to the *Macworld Australia* reader who submits the best and most useful tip (undocumented tips preferred). This month's prize is a comfortable and portable STM sequel small laptop shoulder bag worth \$99.95.

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HOW TO MAKE COPIES OF ALL YOUR OLD CAMERA'S PICTURES

I've had a number of digital cameras over the years and I'm interested in retrieving all the images shot with a particular one. Any suggestions how I might find them?

Kevin Kinkaid

I have two, in fact. The first is to open iPhoto, choose *File > New Smart Album* and in the sheet that appears create a condition that reads Any Text Contains [camera model], where the last entry is the model iPhoto recognises for your camera. (If you're not sure how iPhoto identifies your camera, just select an image taken with it and click the Info button at the bottom-right of the iPhoto window. In the resulting Info pane look near the top for the model number.)

This is the easy way to do it. However, it may not be the best way. When I tried this with images taken



with an old Nikon Coolpix 950, iPhoto produced not only the original images, but some thumbnails as well. (The blame for this can be laid at my feet as I apparently performed some import goofiness years ago and cluttered up my iPhoto library with these things.)

One way to eliminate this would be to additionally filter images by their size. If I set the bar high enough, none of thumbnails would appear. Regrettably, iPhoto's smart albums don't let you use size as a condition.

Automator, however, does. And that's the other option. Launch Automator and from the workflow template select Workflow and click Choose.

In the Finder, navigate to your iPhoto Library archive (found in youruserfolder/Pictures, by default), Control-click (right-click) on it and choose Show Package Contents. From within this folder drag the Masters folder into the Automator workflow area. This will create a Get Specified Finder Items action. While still in the Finder create a new folder and call it 'Copied Images.'

In Automator select Files & Folders from the Library pane and drag the following actions into the workflow area:

Get Folder Contents, Filter Finder Items and Copy Finder Items. In the Get Folder Contents action enable the Repeat for each subfolder found option.

For the Filter Finder Items action create one condition that reads Any content contains [camera model] (again, entering your camera model). Click the plus (+) button to the right and create another condition that reads Size is greater than 750KB. This should eliminate any thumbnails. Configure this action to read All of the following are true.

Finally, move back to the Finder and drag the Copied Images folder you created to the To pop-up menu found in the last action.

You can save the workflow, but if this is a one-shot deal, click the Run

button at the top of the window. The workflow will copy all the larger images taken with that particular camera into your Copied Images folder.

HOW TO KEEP iCLOUD KEYCHAIN FROM ADDING OLD EMAIL ACCOUNTS

Since I upgraded to Yosemite, the Mail app has started asking for passwords for accounts that I no longer use. I didn't add them when I first set up Yosemite. What's going on?

Carrie Lane

iCloud Keychain is what's going on. At one time you added these accounts to another device you own. When you enabled iCloud Keychain on that device, it made note of these accounts. When you then set up Yosemite and enabled iCloud Keychain on your Mac, iCloud – thinking it was doing you a favour – added those old accounts. Regrettably there's no way to edit out this kind of thing in iCloud Keychain – where you can dictate "Sync this one, but not that one." But hope isn't entirely lost.

As I suggest in the next question, you can often put iCloud Keychain to rights by switching it off on every device associated with it, locating the device that has just the information you want synced, configuring iCloud on that device, enabling iCloud Keychain on that device and then enabling it on your other devices. iCloud should update all your devices with the information from the 'master' device.



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But email accounts are trickier because sometimes we want one collection of accounts on Device A and a different collection on Device B. (When Device A is your personal Mac and Device B is your Mac at work, for example.) The Internet Accounts system preference provides a way to deal with this.

Open it up, select an account that you don't want to use on your Mac and click the minus (-) button at the bottom of the accounts pane. A sheet will appear that offers three options – Remove From All, Cancel and Turn Off Account. Click Turn Off Account and you should see no evidence of this account in the future. If, for one reason or another, that doesn't work, you can simply disable any options the account has – switch off Mail, Contacts and Calendars, for instance.

WHAT TO DO WHEN iCLOUD KEYCHAIN FAILS TO SYNC

When upgrading to OS X Yosemite on my iMac I took your advice and installed it on an external drive. I like it so far, but even though I've switched on and verified Keychain in the iCloud system preference, Safari doesn't know about my previously saved passwords. When I launch Safari, open its preferences and click on the Passwords tab, the area below is empty. Is there some file I need to copy from Mavericks to make this work?

David Collins

You needn't do that. Rather, you just have to give iCloud Keychain a not-so-subtle nudge. Apple outlines the steps for doing so in its Get Help Using iCloud Keychain (support.apple.com/en-au/HT203783) document.

What Apple suggests is that you switch off iCloud Keychain on all devices that use it. Then, figure out which of your devices has the most up-to-date list of your passwords and switch on Keychain for that device.

Shake your device. This can easily retrieve a deleted message.



And finally, turn on iCloud Keychain for all your other devices. This should cause Safari to produce the passwords you're looking for.

As someone who's dealt with this issue (and one who also has more than a handful of devices that use iCloud Keychain) I might suggest that you first try a shorter route. And that would be to switch off Keychain on your Yosemite drive, restart your Mac from the Mavericks drive, switch Keychain off and on, switch back to your Yosemite drive and enable Keychain there.

If you're successful (as I have been) you've saved I-don't-know-how-many trips to Settings/System Preferences on your other devices and countless keystrokes as you re-enter your password and verify iCloud Keychain on another device.

ONE EMAIL TIP EVERY MAC USER SHOULD KNOW

I upgraded my iPad mini to iOS 8 and suddenly an accidental left swipe mysteriously wipes out an email message. A gentle left-swipe displays More, Flag and Trash options, but a quicker swipe produces a brief narrow red line and poof! the message is gone into cyberspace. Can you help?

Nancy Hilton

I can. As you've rightly deduced, this is a behaviour introduced with iOS 8 and it works across iPads, iPhones and iPod touches. It was a notion Apple introduced with the idea that it's an easy way to quickly delete messages. The problem is that if you're a little too frisky in your swiping you can accidentally delete messages.

For IMAP accounts these messages should appear in the Trash folder of the associated account. Just navigate back to that folder and move the messages back to the Inbox. But that's tedious when there's an easier way.

Shake it.

And by 'it' I mean your iPad (or iPhone or iPod touch). This is the 'undo' gesture that far too many of us forget about. When you've inadvertently deleted a message, give your iPad a vigorous shake and an Undo Trash window should appear. Tap Undo and the message will reappear. (I say "should" because while this works very well with my iPhone, it can be hit-or-miss on my iPad Air.)

"But hold the darned phone (or iPad)!" I hear protested. "Within the Mail, Contacts, Calendar setting there's an Ask Before Deleting switch. Surely if you enable that switch you'll be queried before another message vanishes!"

Ah, but no. This switch applies only to those situations where you tap a message to reveal it and then tap on the Trash icon at the bottom of the screen. It won't interfere with swipe-deletions.

Likewise, although you can tap Swipe Options in the Mail, Contacts, Calendars setting; tap Swipe Left; and then tap None; this doesn't prevent the rapid swipe gesture from deleting messages. It only allows you to switch the Flag option on or off.

HOW TO RESTORE A MISSING RECOVERY PARTITION

I installed a clean copy of Yosemite on an external hard drive, which I cloned to another Mac using the demo of Carbon Copy Cloner. When trying to troubleshoot something on that Mac I discovered that it had no recovery partition. Is there any way I can create one?

Kai Peterson

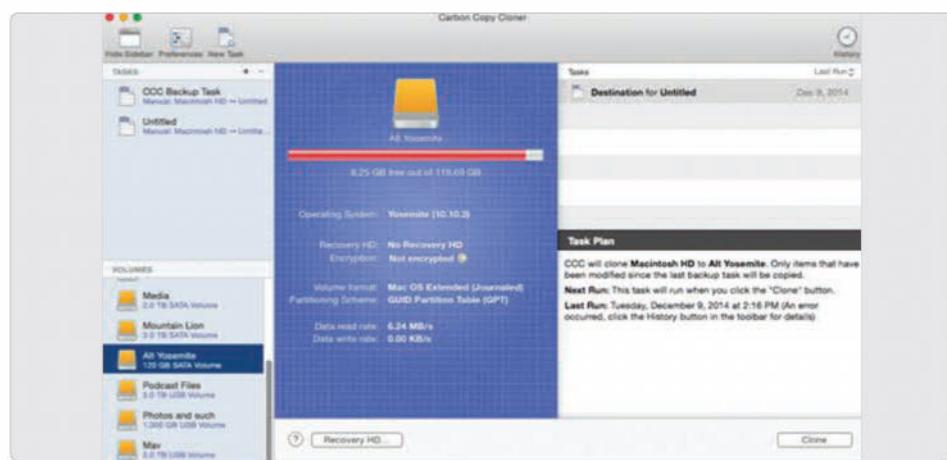
There is. Before I walk through it I should tell you that this is expected behaviour. When Carbon Copy Cloner 4 clones a bootable drive to another drive, it doesn't create a recovery partition in the same way that the OS X installer does. Instead, it creates an archive of it and places the archive here: /Library/Application Support/com.bombich.ccc.

This archive provides you with the means to install a recovery partition on the drive – and you can do it while booted from that drive. Just launch Carbon Copy Cloner again, click Show Sidebar in the toolbar and select the affected drive in the Volumes list. Information about it will appear to the right.

Click the Recovery HD button at the bottom of the window and

a sheet will appear that explains something about the necessity of the recovery partition. If you'd like to install it, just click the Create Recovery HD button at the bottom of the sheet.

Carbon Copy Cloner will unmount the volume, resize the main partition to make room for the recovery partition, install the necessary software and then remount the volume. ↗



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Music adapters

Unfortunately, not all speakers offer wireless connectivity. But that can change with the aid of an adapter. ADAM TURNER takes a look at four options.

Kaiser Baas SoundShift

Playing music wirelessly via DLNA or Apple's AirPlay, Kaiser Baas' SoundShift connects to your home Wi-Fi network or creates its own.

The palm-sized SoundShift is inconspicuous enough to hide out of the way in hard-to-reach places. It's powered via a micro-USB port using the supplied 5V adapter. The SoundShift features both a rear 3.5mm AUX output jack and a SP/DIF digital optical output for connecting to powered speakers, as none of the music adapters in this bunch feature a built-in amplifier.

The SoundShift supports 802.11n Wi-Fi networks, but only at 2.4GHz. Once connected, it acts as an AirPlay speaker for easy streaming from iGadgets and computers running iTunes. Alternatively, you can use it as a DLNA speaker and stream music from a wide range of mobile and desktop apps. This is handy if you're catering to the needs of a blended home rather than an Apple-only environment.

You can install several SoundShifts around your home, all linked to your Wi-Fi network, but it's not a multi-room audio system and you can't stream the same song to multiple SoundShifts in sync.

Bottom line. If you don't have a home Wi-Fi network the SoundShift can generate a Wi-Fi hotspot so you can connect your devices. There's no built-in Ethernet port, so you can't connect the SoundShift to your broadband modem and offer wireless internet access throughout your home. Nor can it act as a Wi-Fi extender.



\$99.95 / KAISER BAAS

www.kaiserbaas.com.au

PROS AirPlay; DLNA

CONS No 5GHz; no Wi-Fi extender

D-Link DCH-M225 Wi-Fi audio extender

Like Kaiser Baas' SoundShift, this D-Link audio extender supports 802.11n Wi-Fi networks at 2.4GHz, but not 5GHz. This limitation won't bother some people, but if your wireless network tends to choke when someone turns on the microwave oven then you're likely to run into trouble streaming music on the 2.4GHz band and you should consider upgrading to a dual-band 2.4/5GHz wireless network.

Wireless setup is easy, as the D-Link supports WPS, which lets you connect to a Wi-Fi network with the press of a button if your wireless router supports it (or else you can configure it manually). As a bonus, the D-Link can also act as a 2.4GHz Wi-Fi range extender, helping boost your wireless network to reduce coverage black spots around your home (it creates a second network with '-EXT' added to the name).

If you don't have a home Wi-Fi network, the D-Link can generate its own network, but there's no Ethernet port so you can't connect it to your broadband modem and offer wireless internet access.

The D-Link is designed to hang from a power socket, but it's much less bulky than the Netgear and Apple's early AirPort Expresses. There's a 3.5mm AUX jack on the bottom for connecting to powered speakers, but no digital audio output.

Bottom line. Supporting AirPlay and DLNA streaming, D-Link's Wi-Fi music adapter is also a Wi-Fi extender. You can play different songs to different D-Link adapters using different apps or devices, but it's not a multi-room audio system and you can't stream the same song to multiple adapters in sync.



\$79.95 / D-LINK

www.dlink.com.au

PROS AirPlay; DLNA; Wi-Fi extender

CONS No 5GHz; no digital output

Netgear WN3500RP Dual Band Wi-Fi Range Extender

If your microwave oven cripples your 2.4GHz Wi-Fi network then 5GHz is a wise investment. This Netgear is a dual-band Wi-Fi extender, helping both your 2.4GHz and 5GHz networks reach the far corners of your home.

The Netgear generates two new networks, using the same names as your current networks but adding '_2GEXT' and '_5GEXT'. Netgear recommends only connecting to the extended networks when you can't get adequate coverage from your primary networks – but regularly switching between them can become a hassle.

There's also an Ethernet port for connecting devices like internet-enabled home entertainment gear, which may not support Wi-Fi. You can't use this Ethernet port to plug the Netgear directly into your broadband modem/router to create a Wi-Fi network, you can only extend an existing Wi-Fi network.

The Netgear features a 3.5mm AUX jack for connecting to powered speakers, but not a digital audio output. It's designed to support blended households – offering AirPlay stream to iGadget owners and DLNA streaming to others. It supports multi-room audio via AirPlay and our music stayed in sync when streaming from iTunes on a Mac to two Netgear extenders, but not when we used a mix of Netgear and Apple extenders.

You'll also find a USB port on the Netgear for connecting up a printer, with AirPrint support, so you can print from your iGadgets. There's no support for attaching a USB hard drive to share on your home network.

Unfortunately, the Netgear is a bulky unit that can make it impractical for some tight spaces, even if you use the optional short power cable rather than hanging it directly from a power socket.

Bottom line. A Wi-Fi booster that extends two networks simultaneously, the Netgear offers a step up in reliability.



\$149 / NETGEAR

www.netgear.com.au

PROS AirPlay; DLNA; Ethernet; dual-band Wi-Fi extender

CONS No digital output

Apple Airport Express

The original Airport Express was a bulky unit that hung from a power socket, but the new models are palm-sized boxes that come with a power cable – similar to the third-generation Apple TV – making them easy to install in hard-to-reach locations.

You can connect the Airport Express to your broadband modem/router via Ethernet to create a home Wi-Fi network, or else it can join your existing Wi-Fi networks to extend the signal to the far reaches of your home. When acting as a Wi-Fi extender, it doesn't alter the network names, making it easier to roam between wireless base stations as you move around your home.

There are two Ethernet ports on the back, both of which can supply internet access when the Airport Express is linked to your Wi-Fi network. Alongside them is a USB port for connecting a printer or USB storage device to your home network. There's also a combination analogue/digital 3.5mm audio jack for connecting to powered speakers.

Once it's connected to your home network, the Airport Express appears as an AirPlay speaker to iGadgets and iTunes running on a Mac or PC (as do any Apple TV boxes on your network). There's multi-room audio support when streaming from iTunes on a computer, letting you play the same song in sync around your home. Alternatively, you can play different songs to different speakers using different devices.

As you'd expect from Apple there's no support for DLNA streaming, which is frustrating, but you will find unofficial AirPlay support built into a range of Android music apps.

Bottom line. Apple's Airport Express can act as the heart of your Wi-Fi network, or else it can extend both your 2.4GHz and 5GHz networks to deal with black spots around your home. 



\$119 / APPLE

www.apple.com.au

PROS AirPlay; Ethernet; dual-band Wi-Fi extender

CONS No DLNA



Tile

Crowdfunded device that will help you find your keys.

Tile was crowdfunded back in 2013 by thousands of backers who felt that this was the kind of device that could properly track their stuff.

Tile costs US\$25 a piece (with discounts for multi-tile packs) and is about as big as a matchbook. You will have to buy more than one Tile if you plan to track multiple things. It has a keyring hole so you can easily attach it to your keys or you can stick it to things with the included adhesive square. It's a tad on the thick side and though it isn't bulky, it's still a significant addition to your keychain, or wherever you put it. It's also water resistant and constructed out of durable material, so you don't have to worry about it falling apart.

Tile is helpful for people who tend to misplace common things, like keys or a wallet. If you do lose something with a Tile attached to it, you can ping it via Bluetooth and it will play an adorable chiptune melody until you confirmed that you have found it. If it's too far out of range, you can then use the Community Find feature available within the app to locate it. Since Tile doesn't have GPS tracking built-in, it relies on other users with the Tile app to locate your missing square. That location information is then registered as the

last place it was seen. It's like a virtual lost and found and you don't have to be a Tile user to help out others.

The good news is that all of Tile's features work well, save for a few awkward times that the Tile app couldn't figure out that my keys were right next to my phone. Tile's Bluetooth range extends up to 30 metres and, as long as other Tile users have Bluetooth on, you'll be able to track where your stuff is. The tunes that Tile emits are loud enough to hear in a noisy house, too.

Here's the bad part. Instead of providing a user-replaceable battery, Tile is completely sealed. This is what supposedly makes it resistant to water, but since there's no way to replace any of its innards on your own, you'll have to buy another one when the device eventually dies. Tile promises that the device will last for an entire year, and the company says it's working on a renewal program of sorts to offer new Tiles at a discounted price, but that means there's still an annual upkeep fee that you'll have to consider.

There's also the question of whether remembering to trade in your Tile on an annual basis is actually worth the utility of the device. Sure, you may misplace your keys every once in a while, but is that worth it? Isn't the point of Tile not to worry

if your life gets so busy that you misplace things? How do they expect busy worker bees to remember to trade in their Tile for a new one on top of everything else in their lives?

The other issue is that Tile's Community Find feature will only work as intended in an area with lots of other Tile users. It doesn't seem to me that it'd work well beyond big cities.

Bottom line. I can see Tile being a really handy device for travellers who want to track lost luggage or as a cheaper alternative to tracking a pet around town, but I can't get behind paying US\$25 a year or more for a device that helps me realise I'm always leaving my keys in the kitchen. ☺

– FLORENCE ION



TILE

www.thetileapp.com

PROS Water resistant and durable, so you don't have to worry about weather killing it; small enough that it fits in most places

CONS Battery isn't user-replaceable; Community Find relies on a large user base, which some areas may not have

US\$25 + SHIPPING



Nikon D3300

Solid compact DSLR for beginner and pro alike.

The Nikon D3300 offers a pleasing set of features for newbies as well as power users, especially given its relatively low price and compact size.

Right out of the box, the D3300 distinguishes itself by feeling like a premium product. This is especially evident in the D3300's buttons, power switch, scroll wheel and 360-degree dial. Everything moves smoothly, like butter. Even the shutter mechanism sounds comparatively quiet and smooth.

The D3300's design is easy to learn and pleasant to use. My fingers could easily, almost blindly, find their way around the camera, with a comfy spot for my thumb to rest at the upper-right corner.

On top of the camera sits a 360-degree dial with the usual settings (program, shutter priority, aperture priority, auto and manual modes) as well as presets for Auto (with and without flash), portrait, landscape, sports, child, sports, macro and night portrait.

The D3300 is a capable camera that neither requires training wheels nor constrains you as you get more familiar with its operation. The eight-way rocker at the back of the camera (with a centred OK button) made quick work of navigating through menu options. At the left of the bright, high-resolution 3in LCD sits another five buttons, most of which are self-explanatory.

The D3300's on-screen display is very visual, with a touch of old-school skeuomorphic graphics for depicting shutter speed, aperture and ISO. The visuals don't get in the way much and they provide a clean at-a-glance organisation to what could easily become a cluttered-looking display. I liked that visual display, but some of these options – along with more advanced choices – are built into the tabbed shooting menu, too.

The D3300 has 11-point auto-focus, which is decent but at times limited my options when composing shots. If you've ever tried more, this could seem more constraining than you'd expect. Once you enable the option in the camera's menus, changing auto-focus points is simple and fast, thanks to the aforementioned rocker switch.

Entering Live View mode for shooting is simple: tap a dedicated button, just above the rocker and below the thumb rest. The rocker makes it reasonably fast and easy to adjust focus in Live View, since you can move the focus point on an angle, too. While we had a sense the focus locked in quickly, it was still sluggish enough that you may miss that celebratory reaction shot if you're depending upon split-second focus speed.

The D3300's capture speed is five frames per second – competitive for this class of cameras. That's enough

for many fast-moving environments, such as sporting events.

At ISO 200, the D3300's images looked very good. In P mode, the camera tended to meter in a way that it captured slightly darker exposures than on some of its competitors.

Nonetheless, images looked great, with pleasing and accurate colours and sharp detail when viewed at 100 percent. While Nikon is known for capturing images with minimal noise at high ISOs, beware just how far you'll want to push this model. As with other cameras in this class, images looked good up to ISO 800. By ISO 1600 you'd start seeing visible noise, and ISO 3200 and beyond became soft and noisy. Nikon rates its battery for about 600 shots.

Bottom line. The D3300 is a strong choice for those looking to graduate into the realm of digital SLRs without breaking their wallets, yet it comes with enough advanced features to keep budding enthusiasts engaged. ■

– MELISSA PERENSON



JB HI-FI

www.jbhifi.com.au

PROS Friendly interface; smooth operation

CONS Program mode tends to produce darker exposures

\$498 (BODY ONLY)

Logitech Keys-to-Go

A great iPad keyboard that doesn't lock you into a case.

The Logitech Keys-to-Go is compact, covered in a spill-resistant fabric, boasts three months' battery life and most intriguingly lacks any method for connecting itself to your iPad. Up until this point, I have only ever used a keyboard that doubled as a stand, or completely enclosed my iPad in a folio-type housing, but I appreciate how Keys-To-Go lets me use any case I want – or no case at all.

As with the rest of Logitech's lineup, the top row of the Keys-To-Go keyboard offers shortcut keys for common iOS tasks. With the press of a button you can return to the home screen, open Spotlight, launch Siri, activate the fast app-switching view, take a screenshot, control media playback and adjust your iPad's volume.

In the top-right corner of the keyboard is a button with a battery icon on it. Pressing it causes the small LED to light up, indicating the current level of the keyboard's battery. I appreciate the ability to quickly identify if the keyboard needs to be charged,

especially if I'm about to head to a coffee shop or on a business trip. But I desperately miss the lock key, which is normally located in the same spot on other Logitech keyboards. I'm constantly locking my iPad when I walk away from my desk, and I enjoyed having a keyboard shortcut to accomplish this. Granted, reaching up and pressing the Sleep button on my iPad takes minimal effort on my part. It's retraining my brain to quit reaching for the key and expecting the same result that's challenging.

In testing, I was able to regularly transition from my MacBook Air's keyboard to the Keys-To-Go without any major learning curve. The keyboard's overall footprint measures at 24.2cm x 13.7cm x 0.6cm. What does that mean to you? The outer keys such as Shift, Delete and Return have seen the biggest reduction in overall size, with the rest of the keys remaining nearly full-size.

I'm not sure if it's due to the material used to cover the keyboard, or the way the keys are engineered

underneath it, but this thing is astonishingly quiet. No matter how hard I would press a key, I was only ever able to elicit a subdued 'click' from the keyboard.

However, there is one problem that's likely to drive you as crazy as it did me. When using the keyboard on a smooth surface, such as a finished wood desk or table, it moves. (I don't have a glass table, but I imagine the problem would be present there as well.) It wiggles just enough to throw off your typing, forcing you to stop and adjust the keyboard or move your hands to the correct keys. It's an ever-so-slight movement, but one that over time becomes increasingly annoying.

When resting the keyboard on my lap, or an unfinished surface, the problem vanished. I would love to see small feet added to the corners to eliminate the issue.

Bottom line. For users of either size iPad or even an iPhone 6 Plus, the Keys-To-Go is a solid choice. Not only does it ditch the requirement to replace (or remove) the case on your device, but it's also lightweight, super portable, quiet and offers a familiar typing experience. The wiggling issue I experienced on a slick surface can be easily remedied with a little ingenuity. ☺

– JASON CIPRIANI



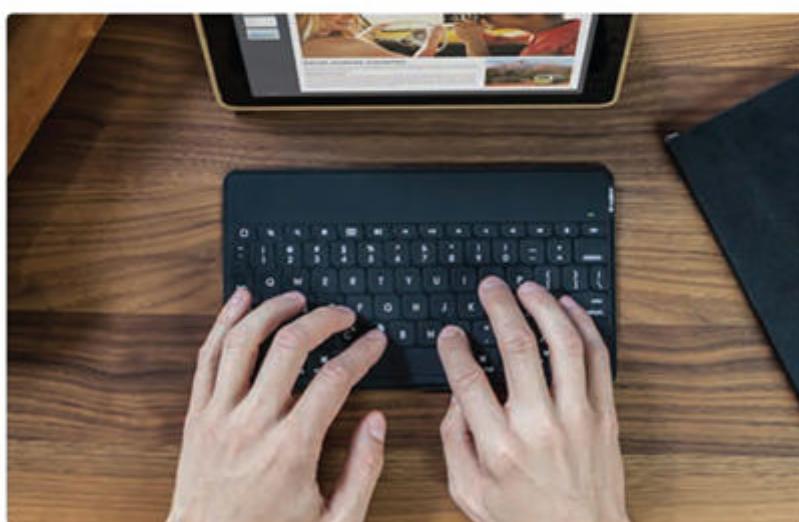
LOGITECH

www.logitech.com/en-au

PROS You can use any case; great battery life

CONS Slides around on smooth surfaces

\$79.95



D-Link mydlink Network Video Recorder

The more cameras you add, the more affordable the DNR-312L becomes.

D-Link's mydlink Network Video Recorder with HDMI output (DNR-312L) is a misleading product. It looks for all the world like a NAS (Network-attached Storage) box, it has a NAS-like user interface and it's priced like a NAS box.

But the DNR-312L differs from that breed in two important ways: it's dedicated solely to video surveillance and there are no camera licences to buy. Indeed, the DNR-312L supports a whopping nine cameras without any further purchase.

With more general purpose NAS boxes, you often must pay additional licence fees when you connect cameras. On the other hand, a true NAS box offers all sorts of other functionality, too.

Factor in \$50 for the 1TB drive that you'll need if you want to record anything, and you're talking \$450 for the DNR-312L. That's a very NAS-like price tag, because as with everything NAS or surveillance related, you pay a hefty premium.

D-Link's DNR-312L offers no advantage over a NAS such as the QNAP TS-251 when you're talking about two cameras and the QNAP delivers a boatload of non-surveillance features. The instant you go beyond two cameras, however, QNAP's \$60 licences start to add up. There are other NAS boxes that offer video surveillance for less money, but the TS-251 is one of the few that offers HDMI output at a similar price to the DNR-312L.

The HDMI output allows the DNR-312L to render its interface on a local display, so you can manage the unit without firing up a web browser on another computer. The DNR-312L also lets you attach a mouse via one of its two USB ports, so you can more easily navigate its user interface. Oddly enough, however, it does not support a USB keyboard. D-Link promises a firmware update will fix this, but you'll need to rely on a virtual on-screen keyboard to enter your user name, password and other information until that update arrives.

I did my hands-on using nothing but D-Link cameras for two reasons: that's all I had on hand and at the time of writing that's all the DNR-312L supports. If you're sitting on a fleet of IP cameras from other vendors, you can quit reading now and explore other options. My blessings. Given my situation, however, it was all good: the DNR-312L located my three D-Link cameras and automatically added them with the only user input required being the camera's user name and password.

The surveillance app dominates the DNR-312L's on-screen interface. In fact, there's nothing else outside of dialogues and setup screens. The basic NAS administrative functions, such as email notifications, DHCP serving, users and so on, are present; but there's no user storage, media streaming, BitTorrent support or similar features.

D-Link's interface is easy to use and the standard surveillance features



are all here: motion detection, camera search, pan-and-tilt controls, logs, review and more. It also records a low-resolution stream and a high-resolution stream, with both available for playback.

If you're starting your network surveillance system from scratch, the DNR-312L is worth checking out. It's easy to set up and operate and it's significantly cheaper than traditional NAS solutions when you exceed two cameras.

The DNR-312L, however, currently supports only D-Link webcams (an upcoming firmware update promises third-party camera support) and it lacks the diverse non-surveillance functionality of the NAS competition. That renders it a surveillance appliance competing with canned low-end consumer surveillance systems. Viewed in that context, the DNR-312L is no particular bargain. ↗

– JON JACOBI



MACFIXIT AUSTRALIA
www.macfixit.com.au

PROS Super easy to use; can be used with any combination of 2.5in drives

CONS Swapping drives doesn't always give you more space; poor performance, even with SSDs

\$629 (ENCLOSURE ONLY)



The Last Tinker: City of Colors

A perfectly charming, family friendly platformer.

The Last Tinker hasn't received the attention it deserves.

And it deserves quite a bit of attention, because this is a great (if simple) game.

The Last Tinker looks like a kid's game and it could be a kid's game. It's definitely pretty simple as far as 'platformers' go. In fact, I almost hate to strap that genre onto it because it's not really a platformer. Jumping occurs more like *Assassin's Creed*'s free-running or *Zelda*'s auto-jump – there's no dedicated button for it. You just sort of reach the end of a platform and then leap off it onto the next one, or fall off if there's nothing waiting.

This lends itself to very fluid, fast-paced animations and some clever grinding sections reminiscent of *Jet Set Radio* or some of the 3D *Sonic* games, but it also makes the game damn simple. If you're coming to this expecting the challenge of even *Mario 64* (not a terribly hard game) then you're going to be disappointed. There are also a handful of easy puzzles to break up the pacing, but if you're at all familiar with games they

won't exactly leave you scratching your head.

But *The Last Tinker* sort of lulls you into a rhythm that's pleasant, if not difficult, and it ends up feeling like a miniature version of some bigger games. Combat even has a *Batman: Arkham Asylum* flow to it that I never would've expected, and there are the expected tributes to classic platformers – objects that explode into currency when hit, collectibles hidden in corners and a silent-but-still-somehow-emotive main character.

You play as the titular last of the Tinkers, Koru, a monkey-boy who lives in the multi-hued city of Colortown. Or at least, parts of it are multi-hued – the parts that aren't infested by a bunch of racists.

The Red, Green and Blue districts of Colortown used to live in harmony, but over time that's collapsed and now all three districts live in big walled ghettos to keep the other two groups away. The only part of the city that's still unified is the Market District, which is where Koru resides. If only there were some way of reuniting the city,

perhaps through some sort of world-ending disaster...

Colortown, and Tinkerworld in general, is a place built from craft materials. It's paper, glue, cardboard and paint. When people 'talk' in their gibberish language, the words are written in chalk on floating cardboard speech bubbles.

You're basically playing through a claymation film, like a technicolour version of *Chicken Run*. The aesthetic is definitely pulling most of the weight in this game, with charming octopuses and a sun that goes to sleep at night to become the moon and even a Bob Ross reference. The soundtrack is similarly spectacular, with different themes for each area and a few music-based areas that take full advantage of the wonderful orchestration. My favourite was a twangy guitar theme, but all of the tracks are solid.

Bottom line. It's just charming, OK? If you're tired of browns and greys, the drab colour palette of most modern games, this is the perfect antidote to gently glide through over the course of a few nights. *The Last Tinker*'s not difficult for an adult who's reasonably familiar with games, but I can't deny I enjoyed playing it.

Yes, I wish it was a real platformer instead of an auto-jump game, and I think the final boss needed tuning (or at least some checkpoints). This is one to toss on the shelf for the kids though and then pull down late at night after they've gone to bed because damn it, you want to play too. ☺

– HAYDEN DINGMAN



MIMIMI PRODUCTIONS

www.mimimi-productions.de

PROS Gorgeous hand-crafted art style; interesting, if predictable, story

CONS Repetitive puzzles

US\$19.99 (VIA STEAM)



This War of Mine

This War of Mine conveys some horrific truths about civilian life during warfare and does so in a way that only video games can accomplish.

There's a war going on and you control a group of civilians stranded in the middle of it, the city crumbling around you. All you have to do is survive until it's over.

This War of Mine is split into a day/night cycle. 'Days' are spent playing what amounts to a post-apocalyptic version of *The Sims*. You're shown a side view of your entire base, which is full of random supply caches to loot and debris to clear when you stumble upon it on Day 1 – a valuable start to your survival effort.

Supplies are then used to craft other, more advanced items, many of which are placed around your base. Wood, for instance, can be converted into boards for the windows, into beds, into fuel for a stove, into a rain-catcher, into a workbench, into an animal trap, etc. Items range from utilitarian – the aforementioned stove, for instance – to morale-boosters like a guitar or a comfortable armchair.

As you can imagine, with this many things to craft you're quickly going to burn through (maybe literally) the supplies in your own base. At night you assign your characters to different roles. Sleep is necessary, but rare. You'll have to cycle people on

and off sleep each night, with those remaining awake fulfilling guard or looting duties.

The latter makes up the second half of the game. Each night you'll have the opportunity to send a single character out into the city to loot derelict buildings or not-so-derelict buildings. You can only hit one location every night, and once you've picked over a place those items are gone forever. Not only that, but over time locations will gradually lose their items to simulate other people looting those locations.

A dozen days to keep your soul. Those first dozen days or so are full of enough empty locations you can mostly make your way in the world. You can loot an abandoned house here, steal from a front step there and generally avoid coming into contact with other survivors.

The game opens more and more city locations each night though, and eventually you reach a point where all the empty areas are stripped bare of valuables and you're forced into contact with others on a regular basis. It's at this point *This War of Mine* gets uncomfortable. Because see, you could go infiltrate that military base

for supplies, contending with an entire army of well-trained men with advanced weaponry. Or you could kill a poor guy in the garage and take all of his stuff without fearing for your life.

This isn't *Call of Duty* or *Battlefield* or *Medal of Honor*. This isn't a story of heroics, or valiant sacrifice. It's a story about rats. It's a story about how far you'd go to survive. And it's easy to abstract it – to look at it as a game, with virtual people doing virtual things.

What makes *This War of Mine* particularly horrifying though is that it's not abstraction. Sure, the particulars may be fictional. Sure, it's an oversimplification of human relations. But there are people making these choices, being put through these situations, every damn day.

That's a powerful message. *This War of Mine* says more about the realities of war with its small-scale, side-scrolling interpretation than *Call of Duty* has said across bombastic sequel after bombastic sequel.

Bottom line. *This War of Mine* isn't perfect as a game. Towards the end of a run there's too much downtime – some of the systems are overly exploitable and once you've got a routine set there's little reason to deviate.

This War of Mine conveys some horrific truths about the world we live in, and it does so in a way that other mediums could never accomplish – by forcing you to live with the guilt of your own choices. ☐

– HAYDEN DINGMAN



11 BIT STUDIOS
www.11bitstudios.com

PROS Powerful examination of civilian life in wartime; simple interface belies plenty of depth

CONS Overly repetitive once you've worked out a routine; some systems are a bit too easily exploited

US\$19.99 (VIA STEAM)



Sony PlayStation TV

If you're regularly forced to stop playing video games and surrender the lounge room, then Sony's PlayStation TV could be the perfect home peacekeeper.

The PlayStation TV is a palm-sized box that acts as an extender box for Sony's PlayStation 4 games console. Inside the PlayStation TV lives the guts of a PlayStation Vita handheld console, squished into a tiny set-top box that connects to any television via HDMI. It doesn't feature television tuners and it's not designed to replace the Play TV tuner box available for the PlayStation 3.

When someone else wants to use the main television in the lounge room you can pause your game on the PS4, move to the PlayStation TV in another room and pick up playing where you left off. Of course, that's assuming both devices are connected to your home network via Ethernet or Wi-Fi. You'll need to take your DualShock controller with you, unless you have a spare DualShock 3 or 4 controller, which you can dedicate to the PlayStation TV. Sony doesn't include one in the box, even though the PlayStation TV is useless without one.

You don't need to be in the middle of a game to activate Remote Play; you can use the PlayStation TV to remotely commandeer the PS4 at any time. You're taking full control of the PS4, so people in the lounge room can't keep using it for something else (but they can watch what you're doing).

Remote Play alone may justify the PlayStation TV's spot in your home, but this little box has a few extra tricks up its sleeve. It features a memory card slot on the back that lets you play PlayStation Vita games, except for those games that rely heavily on the Vita's rear touchpad.

You can also tap into the online PlayStation Store to play Vita, PlayStation Portable and PSone games – something the PS4 still can't do – but the results are very hit and miss. There's only support for around 100 titles, and some aren't available in this region, so it really is potluck. If you have a large collection of classic games purchased via the PS3, don't expect many of them to work with the PlayStation TV.

Eventually the PlayStation TV may also play PS3 games streamed from the new PlayStation Now cloud gaming service (formerly Gaikai), although there's no word as to if or when PlayStation Now will be available in Australia. In the US you can subscribe to PlayStation Now or rent individual games, although early pricing isn't great and you're generally better off buying games that you're keen on.

For its final trick, the PlayStation TV can also play movies and music from a USB drive or stream them from a

home DLNA media server running on your computer or Network-attached Storage drive. This is something else you can't do with the PS4 or Apple TV without a little hackery. The PlayStation TV also lets you buy or rent movies and TV shows, but you're limited to standard-definition for now.

Bottom line. If you own a PlayStation 4 and are heavily invested in the PlayStation ecosystem, then Sony's PlayStation TV may be a good fit for your home, especially if it stops fights over the lounge room. Unfortunately, the PlayStation TV becomes less attractive if you're more interested in playing older games. If you want to make the most of your collection of games purchased from the PlayStation Store, then your money may be better off put towards an old PlayStation 3 for the spare room rather than the PlayStation TV. ☒

– ADAM TURNER



SONY

au.playstation.com

PROS Stream PS4 games

CONS Limited support for older games

\$149

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HD
2160p



SmartImage™



UltraWide QHD

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UltraWide HD

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AH

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